



# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number: 155230**

**TO: Satayanarayana Gudibande**  
**Location: REM-3C04&3C18**  
**Art Unit: 1654**  
**Thursday, June 09, 2005**

**Case Serial Number: 10/509620**

**From: Alex Waclawiw**  
**Location: Biotech-Chem Library**  
**CM1-6A02**  
**Phone: 308-4491**

**Alexandra.waclawiw@uspto.gov**

### **Search Notes**

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STIC-Biotech/ChemLib

155230

From: STIC-ILL  
Sent: Thursday, June 02, 2005 12:51 PM  
To: STIC-Biotech/ChemLib  
Subject: FW: Sequence search

-----Original Message-----

From: Gudibande, Satyanarayana R.  
Sent: Thursday, June 02, 2005 12:50 PM  
To: STIC-ILL  
Subject: Sequence search

From: Satyanarayana R. Gudibande  
Art Unit 1654, Room 3C04  
Mail Box in Room 3C18  
Phone: 272-8146

Date: 5-3-05

Please search the following as soon as possible for application with serial number **10509620**

1. SEQ ID NO: 1-10 against all commercial amino acid sequence databases, issued patents/published applications amino acid sequence database and pending application amino acid sequence database. Please provide a print of all results.

1 aa 11  
2 11  
3 11  
4 11  
5 11  
6 11  
7 11  
8 11  
9 11  
10 aa 11

me

STIC  
-2  
2005

\*\*\*\*\*Point of Contact:\*\*\*\*\*  
STAFF USE ONLY Alexandra Wacławiw  
Technical Info. Specialist  
Searcher: CM1 6A02 Tel: 308-4491  
Searcher Phone: 2-  
Date Searcher Picked up: 6-9  
Date Completed: 6-9 15  
Searcher Prep/Rev. Time: 33  
Online Time: 33

\*\*\*\*\*Type of Search\*\*\*\*\*  
NA#: AA#: 15  
Interference: SPDI:  
S/L: Oligomer:  
Encode/Transl:  
Structure#: Text:  
Inventor: Litigation:

\*\*\*\*\*Vendors and cost where applicable\*\*\*\*\*  
STN: ✓  
DIALOG:  
QUESTEL/ORBIT:  
LEXIS/NEXIS:  
SEQUENCE SYSTEM: ✓  
WWW/Internet:  
Other(Specify):

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155230

From: STIC-ILL  
Sent: Thursday, June 02, 2005 12:51 PM  
To: STIC-Biotech/ChemLib  
Subject: FW: Sequence search

-----Original Message-----

From: Gudibande, Satyanarayana R.  
Sent: Thursday, June 02, 2005 12:50 PM  
To: STIC-ILL  
Subject: Sequence search

From: Satyanarayana R. Gudibande  
Art Unit 1654, Room 3C04  
Mail Box in Room 3C18  
Phone: 272-8146

Date: 5-3-05

Please search the following as soon as possible for application with serial number **10509620**

1. SEQ ID NO:11-15 against all commercial amino acid sequence databases, issued patents/published applications amino acid sequence database and pending application amino acid sequence database. Please provide a print of all results.

11 aa 11  
12 11  
13 11  
14 11  
15 aa 11

me

STIC  
JUN-3 2005  
10:10 AM

\*\*\*\*\*

STAFF USE ONLY Point of Contact:

Searcher: Alexandra Wacławski  
Searcher Phone: 308-4491  
Date Searcher Picked up: 6/1/05  
Date Completed: 6/1/05  
Searcher Prep/Rev. Time: 10:10 AM  
Online Time: 10:10 AM

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Type of Search

NA#: AA#:  
Interference: SPDI:  
S/L: Oligomer:  
Encode/Transl:  
Structure#: Text:  
Inventor: Litigation:

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Vendors and cost where applicable

STN: ☒  
DIALOG: ☒  
QUESTEL/ORBIT: ☒  
LEXIS/NEXIS: ☒  
SEQUENCE SYSTEM: ☒  
WWW/Internet: ☒  
Other(Specify):

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seq 1-10

Gudibande 10/509620

=> d his

(FILE 'HOME' ENTERED AT 08:47:58 ON 09 JUN 2005)

FILE 'REGISTRY' ENTERED AT 08:48:09 ON 09 JUN 2005

FILE 'STNGUIDE' ENTERED AT 08:48:15 ON 09 JUN 2005

L1 0 S YGRRARRRRRR|YGRRARRRRARR|YGRRARRRAARR|YKRKARRRAARR|YARKARRAARR|Y

FILE 'REGISTRY' ENTERED AT 08:50:49 ON 09 JUN 2005

L2 10 S YGRRARRRRRRR|YGRRARRRRARR|YGRRARRRAARR|YKRKARRRAARR|YARKARRAARR|Y

FILE 'HCAPLUS' ENTERED AT 08:51:41 ON 09 JUN 2005

L3 1 S L2

L> seq 1-10

=> fil reg

FILE 'REGISTRY' ENTERED AT 08:52:23 ON 09 JUN 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 8 JUN 2005 HIGHEST RN 851931-88-9  
DICTIONARY FILE UPDATES: 8 JUN 2005 HIGHEST RN 851931-88-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d que 12

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L -> seq 1-10

=> d 12 1-10

L2 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 627867-26-9 REGISTRY  
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CN L-Alanine, L-tyrosyl-L-arginyl-L-arginyl-L-alanyl-L-alanyl-L-arginyl-L-arginyl-L-alanyl-L-alanyl-L-arginyl- (9CI) (CA INDEX NAME)

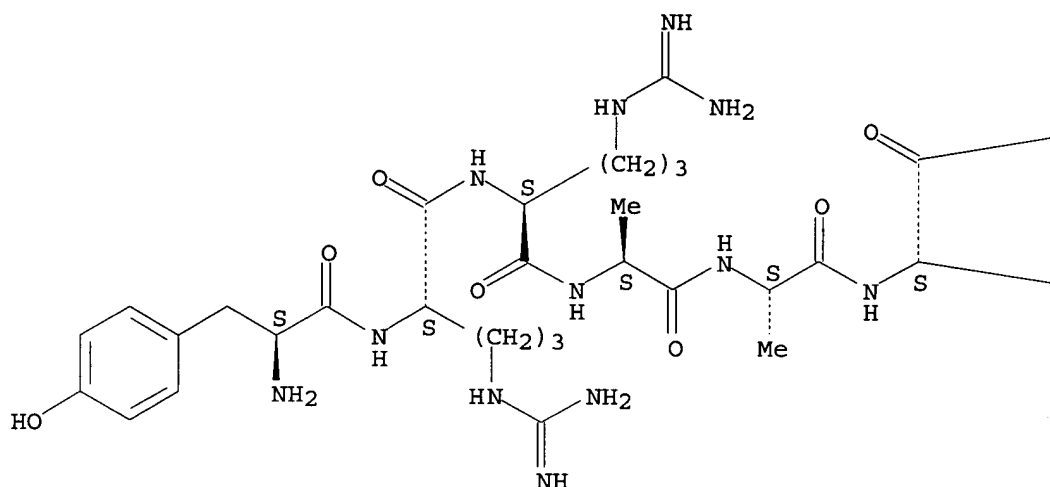
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LC STN Files: CA, CAPLUS, TOXCENTER

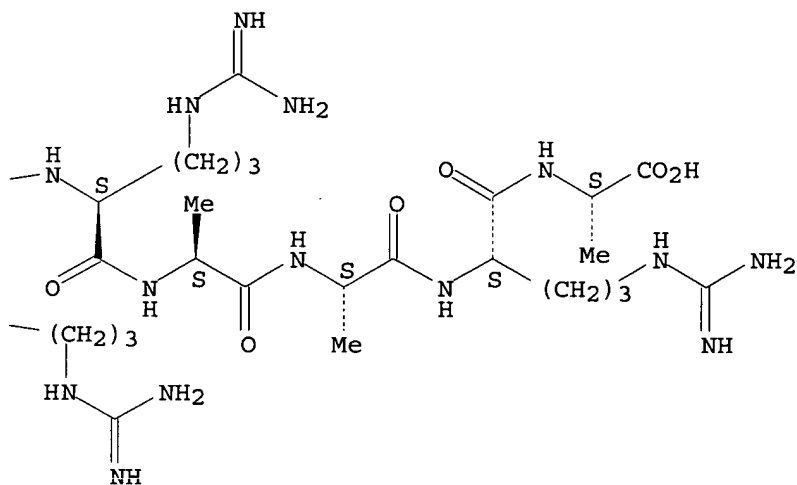
Absolute stereochemistry.



PAGE 1-A



PAGE 1-B



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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN

RN 627867-24-7 REGISTRY

ED Entered STN: 19 Dec 2003

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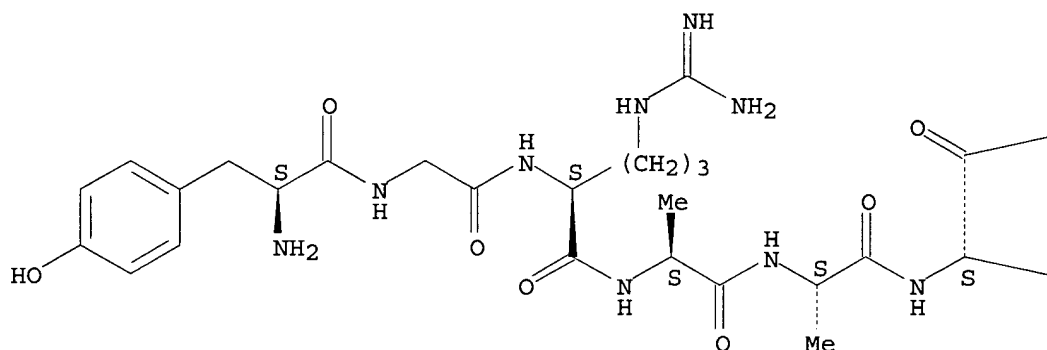
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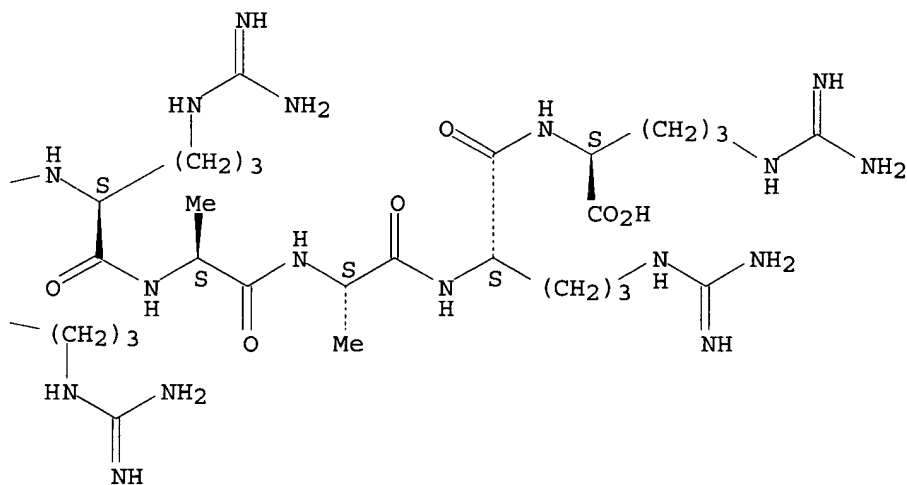
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Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



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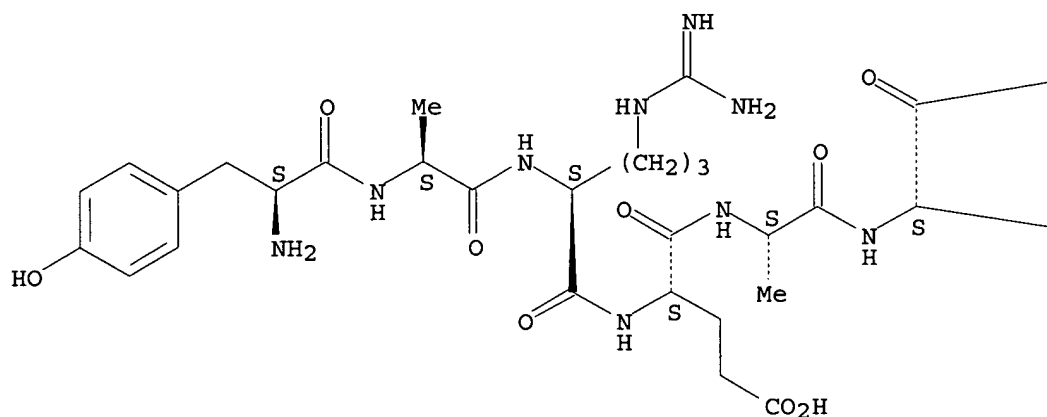
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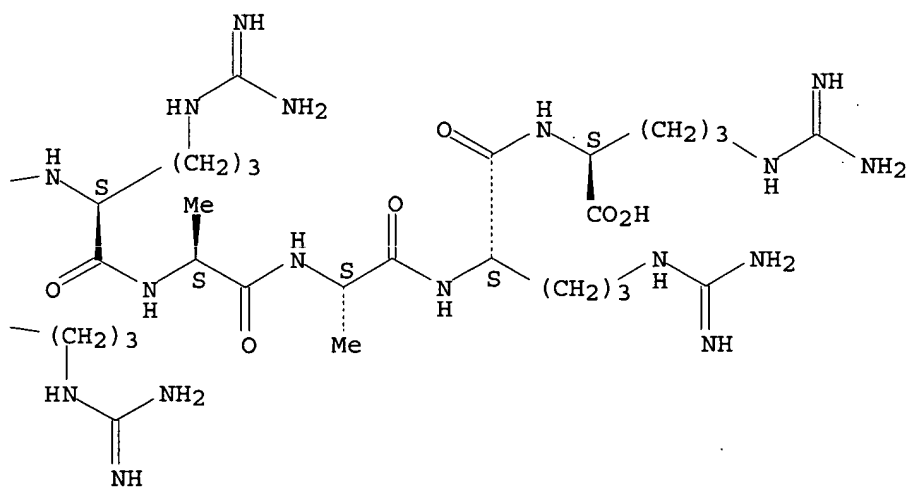
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Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



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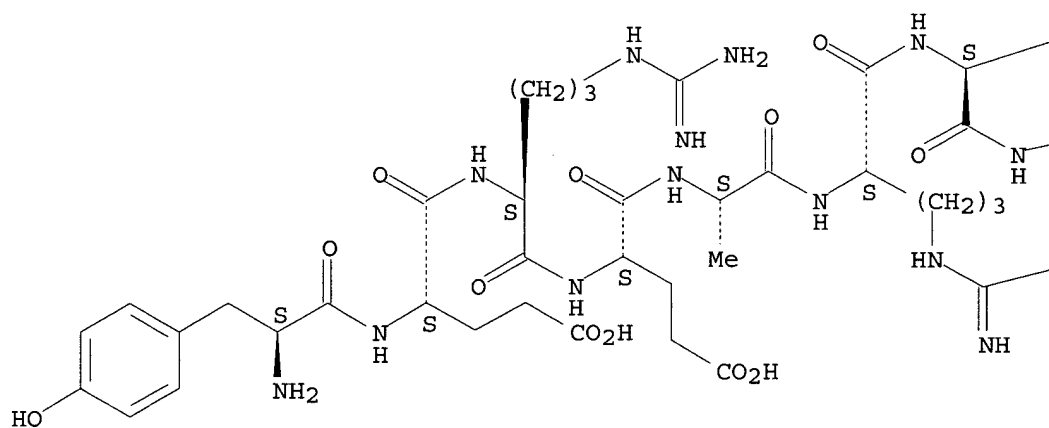
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ED      Entered STN:   19 Dec 2003
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        NAME)
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CN      7: PN: WO03097671 SEQID: 7 claimed sequence
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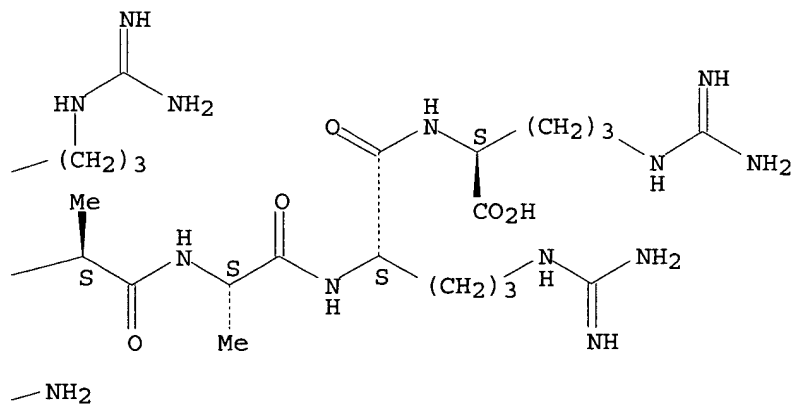
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Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



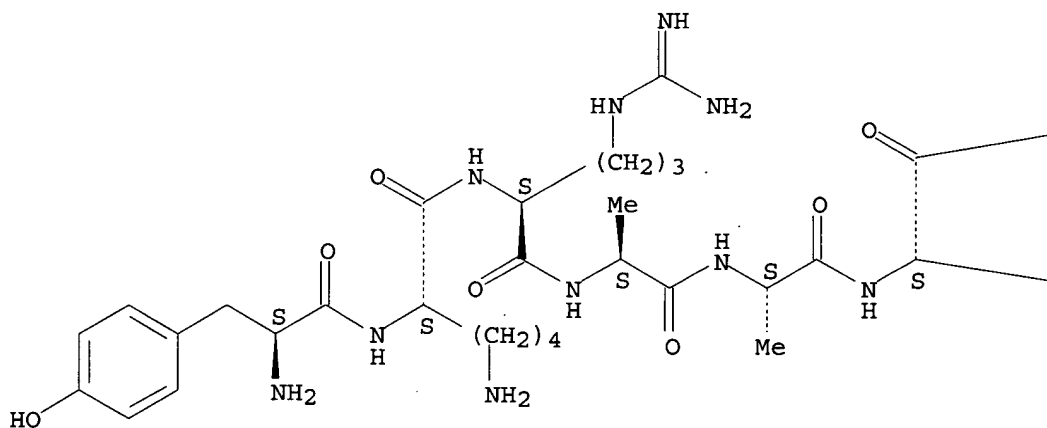
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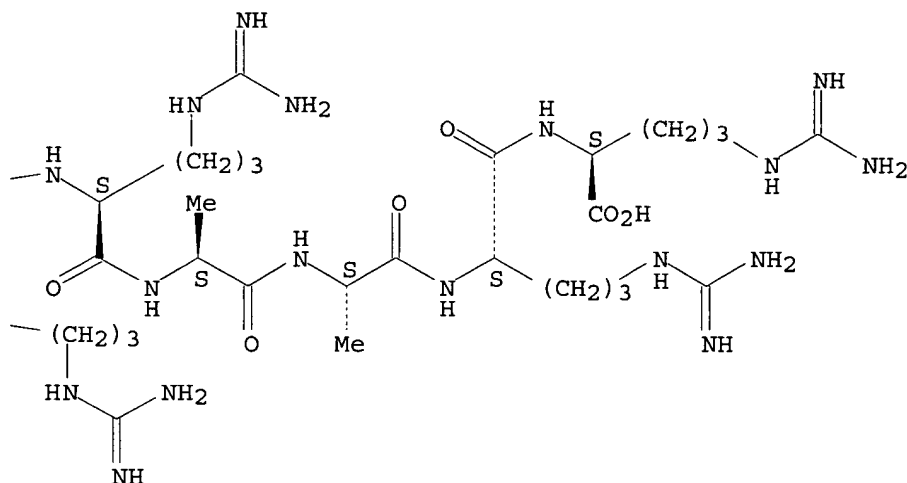
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arginyl-L-alanyl-L-alanyl-L-arginyl- (9CI) (CA INDEX NAME)  
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CN 6: PN: W003097671 SEQID: 6 claimed sequence  
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SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.

PAGE 1-A





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L2 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN

RN 627867-17-8 REGISTRY

ED Entered STN: 19 Dec 2003

CN L-Arginine, L-tyrosyl-L-alanyl-L-arginyl-L-lysyl-L-alanyl-L-arginyl-L-arginyl-L-alanyl-L-alanyl-L-arginyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 5: PN: W003097671 SEQID: 5 claimed sequence

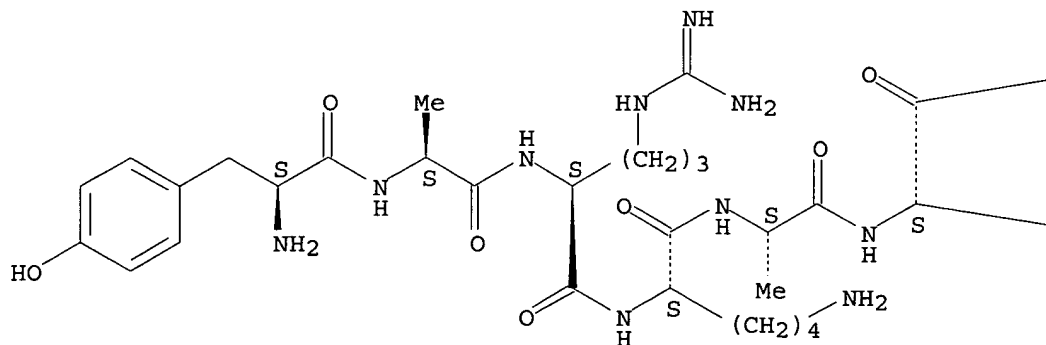
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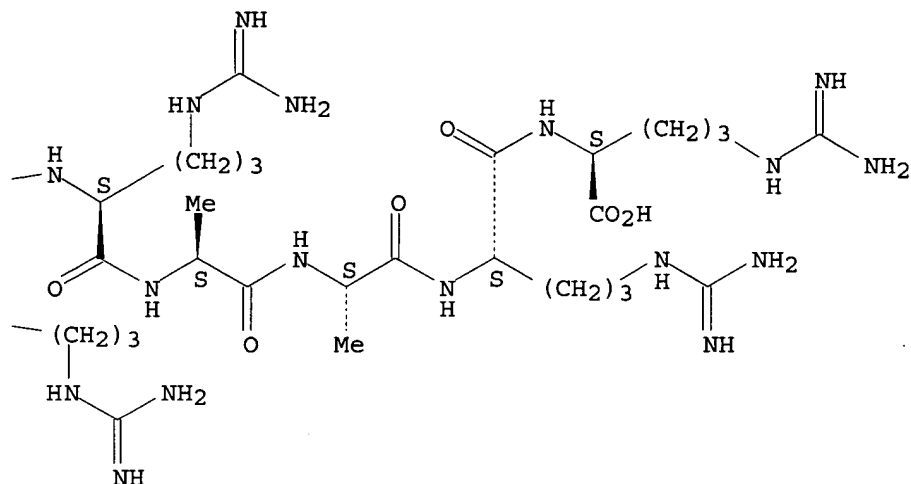
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SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.





\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN

RN 627867-15-6 REGISTRY

ED Entered STN: 19 Dec 2003

CN L-Arginine, L-tyrosyl-L-lysyl-L-arginyl-L-lysyl-L-alanyl-L-arginyl-L-arginyl-L-alanyl-L-alanyl-L-arginyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 4: PN: W003097671 SEQID: 4 claimed sequence

FS PROTEIN SEQUENCE; STEREOSEARCH

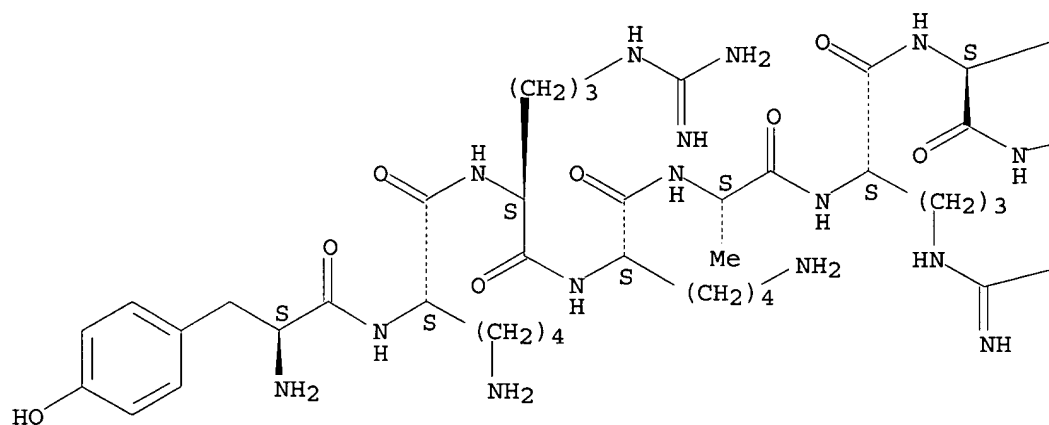
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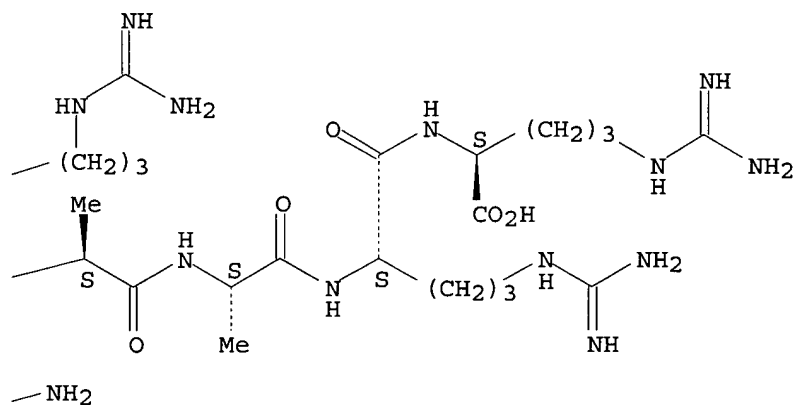
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



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L2 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN

RN 627867-13-4 REGISTRY

ED Entered STN: 19 Dec 2003

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OTHER NAMES:

CN 3: PN: WO03097671 SEQID: 3 claimed sequence

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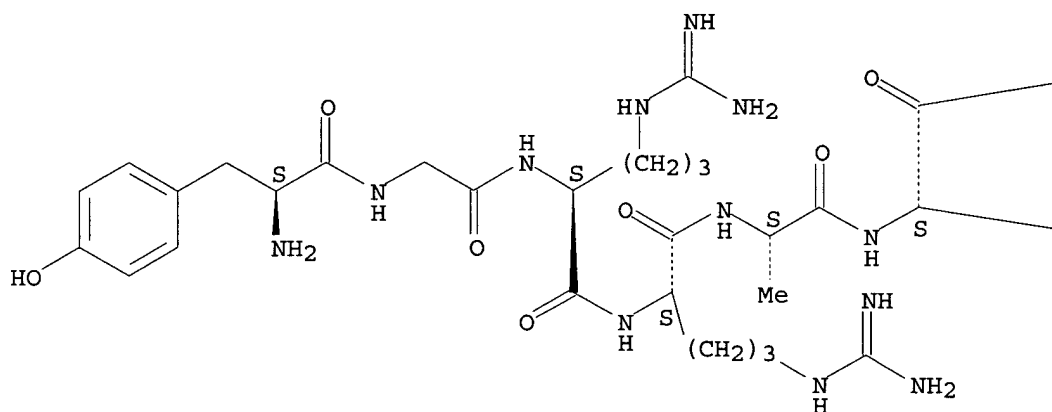
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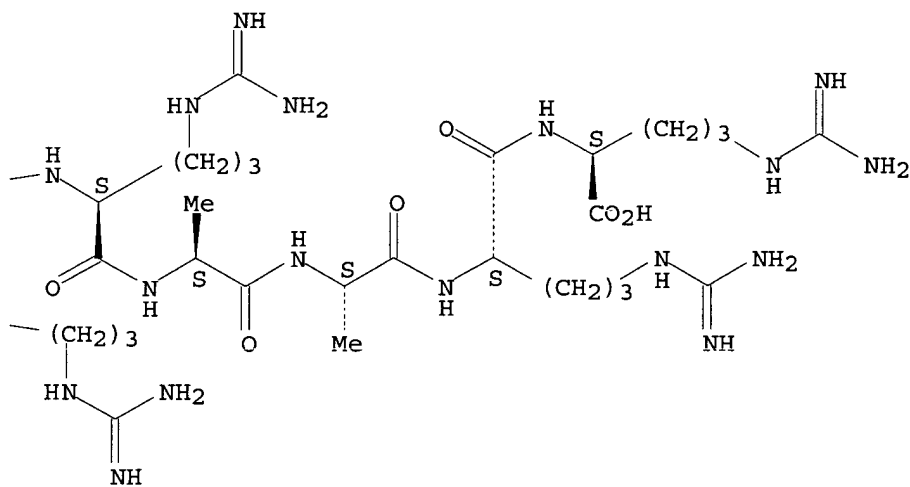
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LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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L2 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 627867-11-2 REGISTRY  
ED Entered STN: 19 Dec 2003

CN L-Arginine, L-tyrosylglycyl-L-arginyl-L-arginyl-L-alanyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arginyl- (9CI) (CA INDEX NAME)

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CN 2: PN: WO03097671 SEQID: 2 claimed sequence

FS PROTEIN SEQUENCE; STEREOSEARCH

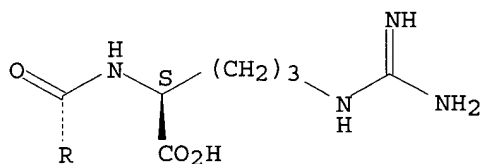
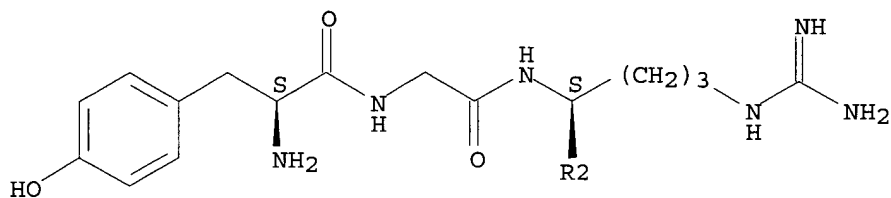
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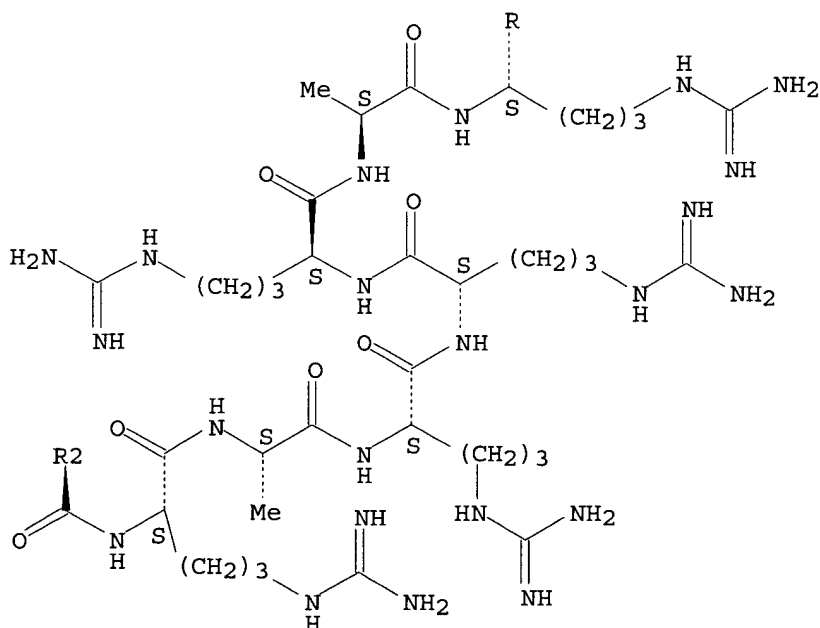
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.

PAGE 1-A

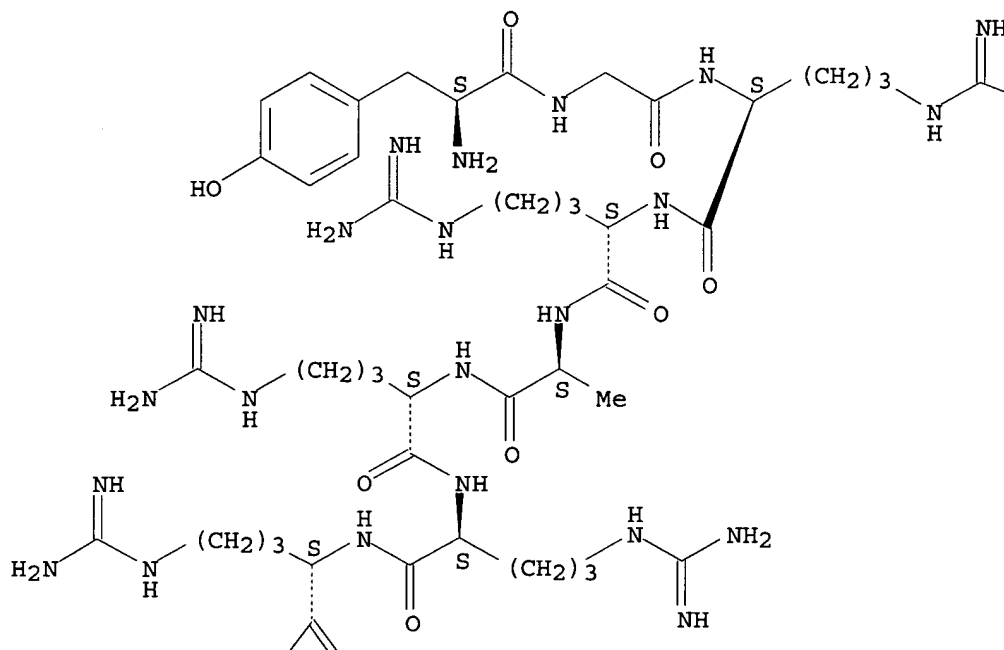


PAGE 2-A



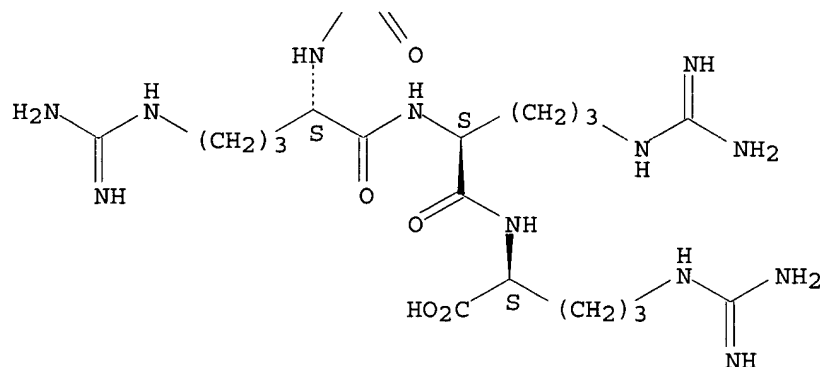
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RN 627867-09-8  REGISTRY
ED Entered STN: 19 Dec 2003
CN L-Arginine, L-tyrosylglycyl-L-arginyl-L-arginyl-L-alanyl-L-arginyl-L-
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OTHER NAMES:
CN 1: PN: WO03097671 SEQID: 1 claimed sequence
FS PROTEIN SEQUENCE; STEREOSEARCH
MF C62 H115 N35 O13
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
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PAGE 1-A



PAGE 1-B

$$\text{—NH}_2$$



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 08:52:46 ON 09 JUN 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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FILE COVERS 1907 - 9 Jun 2005 VOL 142 ISS 24

FILE LAST UPDATED: 8 Jun 2005 (20050608/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que l3

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=> d all l3

L3 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:931389 HCAPLUS  
 DN 140:2156  
 ED Entered STN: 28 Nov 2003  
 TI Cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and a drug delivery system (DDS) targeting cytoplasm  
 IN Kim, Dae-you; Oh, Hae-keun; Kim, Chang-hyun; Kim, Jung-hwan; Jeon, Choon-ju; Kim, Ki-tae; Bae, Yong-soo; Choi, In-soo  
 PA Creagene Inc., S. Korea  
 SO PCT Int. Appl., 77 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C07K007-06  
 CC 6-3 (General Biochemistry)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003097671	A1	20031127	WO 2003-KR630	20030328
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	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1495045	A1	20050112	EP 2003-713056	20030328
	R:				
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PRAI	KR 2002-17546	A	20020329		
	WO 2003-KR630	W	20030328		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003097671	ICM	C07K007-06

OS MARPAT 140:2156

AB The present invention relates to a cytoplasmic transduction peptide (CTP) showing transduction potential, as well as cytoplasmic remaining potential and various uses thereof. The CTP of this invention exhibits a transduction potential identical or higher than the conventional protein transduction, PTD, and a strong tendency to remain in the cytoplasm, so that it is very useful in inducing cytotoxic T lymphocytes (CTL) and a drug delivery system (DDS) targeting cytoplasm.

ST cytoplasm transduction peptide cytotoxic T lymphocyte

IT Cell membrane

Drug delivery systems

Liver

Lymphocyte

 $\alpha$ -Helix

(cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)

IT Peptides, biological studies

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL

(Biological study)

(cytoplasmic transduction; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)

IT Conformation

(protein; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)

IT Liver

(toxicity; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)

IT 604789-17-5 627867-09-8 627867-11-2  
627867-13-4 627867-15-6 627867-17-8  
627867-19-0 627867-20-3 627867-22-5  
627867-24-7 627867-26-9 627867-28-1 627867-30-5  
627867-33-8

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(cytoplasmic transduction peptide sequence; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)

IT 9001-92-7, Proteinase

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)

IT 123251-89-8 143413-47-2 191936-91-1 227199-96-4 244283-56-5  
627867-39-4 627867-44-1 627919-57-7 627919-58-8 627922-43-4  
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627922-49-0 627922-50-3 627922-51-4 627922-52-5 627922-53-6  
627922-54-7 627922-55-8 627922-56-9 627922-57-0 627922-58-1  
627922-59-2 627922-60-5 627922-61-6 627922-62-7 627922-63-8  
627922-64-9 627922-65-0 627922-66-1 627922-67-2 627922-68-3  
627922-69-4 627922-70-7 627922-71-8 627922-72-9 627922-73-0  
627922-74-1 627922-75-2 627922-76-3 627922-77-4 627922-78-5  
627922-79-6 627922-80-9 627922-81-0 627922-82-1 627922-83-2  
627922-84-3 627922-85-4 627922-86-5 627922-87-6 627922-88-7  
627922-89-8

RL: PRP (Properties)  
(unclaimed sequence; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and a drug delivery system (DDS) targeting cytoplasm)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Ford, K; Gene Ther 2001, V8(1), P1 HCAPLUS
- (2) Seibel; WO 9534665 1995 HCAPLUS
- (3) Targeted Genetics Corporation; WO 9528494 1995 HCAPLUS
- (4) Vanderbilt University; US 5807746 1998 HCAPLUS
- (5) Vanderbilt University; US 6043339 2000 HCAPLUS
- (6) Vocero-Akbani, A; Methods Enzymol 2000, V322, P508 HCAPLUS

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SEA 11-15.

Gudibande 10/509,620

=> d his

(FILE 'REGISTRY' ENTERED AT 14:00:52 ON 09 JUN 2005)  
DEL HIS Y

FILE 'REGISTRY' ENTERED AT 14:11:35 ON 09 JUN 2005

L1 1965 S YPRAARRAARR|PARAARRAARR|YGRAARRAARR|YRRAARRAARA|YGRKKRRQRRR/S  
L2 47 S L1 AND SQL<15

FILE 'HCAPLUS' ENTERED AT 14:14:44 ON 09 JUN 2005

L3 248 S L2  
L4 18672 S CYTOPLASMIC  
L5 22 S TRANDUCTION  
L6 4 S L3 AND L4  
L7 0 S L3 AND L5  
L8 1 S L3 AND CTL  
L9 4 S L8 OR L6  
L10 519 S L1  
L11 0 S L10 AND (L4 AND L5)  
L12 4 S L10 AND L4  
L13 5 S L10 AND CTL  
L14 8 S L12 OR L13 OR L9

=> fil reg

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\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
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\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

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information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
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=> d que stat l1

L1 1965 SEA FILE=REGISTRY ABB=ON PLU=ON YPRAARRAARR|PARAARRAARR|YGRAA  
RRAARR|YRRAARRAARA|YGRKKRRQRRR/SQSP

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 14:18:38 ON 09 JUN 2005  
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FILE LAST UPDATED: 8 Jun 2005 (20050608/ED)



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This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que l14

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L1      1965 SEA FILE=REGISTRY ABB=ON PLU=ON YPRAARRAARR|PARAARRAARR|YGRAA
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L2      47 SEA FILE=REGISTRY ABB=ON PLU=ON L1 AND SQL<15
L3      248 SEA FILE=HCAPLUS ABB=ON PLU=ON L2
L4      18672 SEA FILE=HCAPLUS ABB=ON PLU=ON CYTOPLASMIC/OBI
L6      4 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND L4
L8      1 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND CTL/OBI
L9      4 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 OR L6
L10     519 SEA FILE=HCAPLUS ABB=ON PLU=ON L1
L12     4 SEA FILE=HCAPLUS ABB=ON PLU=ON L10 AND L4
L13     5 SEA FILE=HCAPLUS ABB=ON PLU=ON L10 AND CTL/OBI
L14     8 SEA FILE=HCAPLUS ABB=ON PLU=ON L12 OR L13 OR L9

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=> d .ca hitstr l14 1-8

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L14 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:121080 HCAPLUS
DOCUMENT NUMBER: 142:238630
TITLE: Identification of HLA-restricted CTL
        epitopes and preparation of polypeptidic polypeptides
        or nucleic acids for diagnosis, prognosis and
        treatment of infectious disease
INVENTOR(S): Baker, Denise M.; Livingston, Brian D.; Chesnut,
        Robert W.; Sette, Alessandro; Newman, Mark J.
PATENT ASSIGNEE(S): Epimmune Inc., USA
SOURCE: PCT Int. Appl., 458 pp.
        CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005012502	A2	20050210	WO 2004-US9510	20040329
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 2003-458026P P 20030328

ED Entered STN: 11 Feb 2005

AB The present invention is directed to methods for selecting a variant of a peptide epitope which induces a CTL response against another variant(s) of the peptide epitope, by determining whether the variant comprises only conserved

residues, as defined herein, at non-anchor positions in comparison to the other variant(s). These epitopes are supermotifs or motifs that bind to HLA-A1, HLA-A2, HLA-A3, HLA-A11, HLA-A24, HLA-B7, HLA-B27, HLA-B44, HLA-B58 and HLA-B62. These epitopes are identified in Gag, Env, Pol, Nef, Rev, Tat, Vif, Vpr and Vpu of HIV; Pol, Env, Core and NS1/Env2 of HBV; Core, E1, E2, NS1, NS2, NS3, NS4 and NS5 of HCV; E1, E2, E3, E4, E5, E6, E7, L1 and L2 of HPV; and CSP, SSP2, EXP1 and LSA1 or Plasmodium falciparum. The present invention is also directed to variants identified by the methods above; peptides comprising such variants; nucleic acids encoding such variants and peptides; cells comprising such variants, and/or peptides, and/or nucleic acids; compns. comprising such variants, and/or peptides, and/or nucleic acids, and/or cells; as well as therapeutic and diagnostic methods for using such variants, peptides, nucleic acids, cells, and compns.

IC ICM C12N

CC 15-2 (Immunochemistry)

Section cross-reference(s): 3, 9, 63

IT Vaccines

(AIDS; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Antigens

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(CS (circumsporozoite); identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Proteins

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(E1; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Proteins

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(E2; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Proteins

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(E3; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Proteins

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(E5; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Proteins

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(E6; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Proteins

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(E7; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Proteins

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(EXP1; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Histocompatibility antigens

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(HLA (human leukocyte-associated antigen), HLA-B62; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Histocompatibility antigens

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(HLA, class I; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Histocompatibility antigens

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(HLA, class II; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Histocompatibility antigens

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(HLA-A11; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Histocompatibility antigens

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(HLA-A1; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT Histocompatibility antigens

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(HLA-A24; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

- IT Histocompatibility antigens  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(HLA-A2; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Histocompatibility antigens  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(HLA-A3; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Histocompatibility antigens  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(HLA-B, HLA-B58; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Histocompatibility antigens  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(HLA-B27; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Histocompatibility antigens  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(HLA-B44; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Histocompatibility antigens  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(HLA-B7; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(L1; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(L2; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

- (LSA1; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Histocompatibility antigens  
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (MHC (major histocompatibility complex), class I; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (NEP (nuclear export protein); identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (NS1 (nonstructural, 1); identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (NS3 (nonstructural, 3); identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (NS4 (nonstructural, 4); identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (NS5 (nonstructural, 5); identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Transcription factors  
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (Sp2; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Structure-activity relationship  
 (antigen-binding; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Vaccines  
 (antimalarial; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis,

- prognosis and treatment of infectious disease)
- IT Sequence homology analysis  
(computer; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT T cell (lymphocyte)  
(cytotoxic, epitope; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Peptides, biological studies  
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(fusion peptides; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(gene E4; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(gene vif; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(gene vpr; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Proteins  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(gene vpu; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT T cell (lymphocyte)  
(helper cell, epitope; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Antigens  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(hepatitis B core; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Vaccines  
(hepatitis B; identification of HLA-restricted **CTL** epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT AIDS (disease)  
Animal cell

Aspergillus  
 Candida albicans  
 Chlamydia  
 Coccidioides  
 Cryptococcus neoformans  
 Dendritic cell  
 Dengue virus  
 Epitopes  
 Hepatitis B virus  
 Hepatitis C virus  
 Histoplasma  
 Human herpesvirus 4  
 Human immunodeficiency virus  
 Human immunodeficiency virus 1  
 Human papillomavirus  
 Immunotherapy  
 Infection  
 Influenza virus  
 Leishmania  
 Mycobacterium tuberculosis  
 Plasmids  
 Plasmodium (malarial genus)  
 Plasmodium falciparum  
 Prognosis  
 Protein sequences  
 Schistosoma  
 Test kits  
 Trypanosoma  
 Vaccines

(identification of HLA-restricted CTL epitopes and preparation of  
 polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and  
 treatment of infectious disease)

IT Envelope proteins

Rev protein  
 gag proteins  
 nef protein

RL: ARU (Analytical role, unclassified); BSU (Biological study,  
 unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic  
 use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(identification of HLA-restricted CTL epitopes and preparation of  
 polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and  
 treatment of infectious disease)

IT Chimeric gene

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP  
 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(identification of HLA-restricted CTL epitopes and preparation of  
 polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and  
 treatment of infectious disease)

IT Nucleic acids

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)

(identification of HLA-restricted CTL epitopes and preparation of  
 polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and  
 treatment of infectious disease)

IT DNA

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)

(immunization; identification of HLA-restricted CTL epitopes  
 and preparation of polyepitopic polypeptides or nucleic acids for diagnosis,  
 prognosis and treatment of infectious disease)

- IT Diagnosis  
(immunodiagnosis; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Vaccines  
(influenza; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Epitopes  
(mapping; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Gene, microbial  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(minigene; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Polyproteins  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(pol; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Protein motifs  
(supermotif; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Transcription factors  
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(tat; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Mus musculus  
(transgenic; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Vaccines  
(tumor; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Human  
(vaccine treatment; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT Anti-AIDS agents  
Antimalarials  
Antitumor agents  
(vaccines; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)
- IT 844512-21-6 844512-22-7 844512-23-8 844512-24-9 844512-25-0  
844512-26-1 844512-27-2 844512-28-3 844512-29-4 844512-30-7  
844512-31-8 844512-32-9 844512-33-0 844512-34-1 844512-35-2  
844512-36-3 844512-37-4 844512-38-5 844512-39-6 844512-40-9  
844512-41-0 844512-42-1 844512-43-2 844512-44-3 844512-45-4



844512-46-5	844512-47-6	844512-48-7	844512-49-8	844512-50-1
844702-44-9	844702-45-0	844702-46-1	844702-47-2	844702-48-3
844702-49-4	844702-50-7	844702-51-8	844702-52-9	844702-53-0
844702-54-1	844702-55-2	844702-56-3	844702-57-4	844702-58-5
844702-59-6	844702-60-9	844702-61-0	844702-62-1	844702-63-2
844702-64-3	844702-65-4	844702-66-5	844702-67-6	844702-68-7
844702-69-8	844702-70-1	844702-71-2	844702-72-3	844702-73-4
844702-74-5	844702-75-6	844702-76-7	844906-77-0	

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study)

(amino acid sequence; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT 844512-14-7P, Protein (synthetic clone EP-HIV-1090) 844512-15-8P  
844512-16-9P 844512-17-0P 844512-18-1P 844512-19-2P 844512-20-5P,  
Core protein (hepatitis B virus)

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(amino acid sequence; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT	130602-96-9	139079-41-7	148335-25-5	153607-10-4	153607-13-7
	153607-19-3	153607-21-7	155970-24-4	155970-25-5	155970-30-2
	155970-33-5	155970-36-8	160212-93-1	160213-68-3	160214-68-6
	162886-80-8	162886-82-0	169033-90-3	169034-21-3	171089-52-4
	179760-96-4	181763-08-6	195609-75-7	195609-83-7	195609-84-8
	195609-86-0	197089-54-6	197089-56-8	197089-65-9	197156-05-1
	197375-27-2	198626-47-0	199727-50-9	206113-36-2	250728-43-9
	250728-45-1	250728-49-5	250728-50-8	250728-61-1	273734-45-5
	318273-87-9	318470-64-3	334731-64-5	334731-95-2	334751-09-6
	340233-88-7	340234-60-8	352625-16-2	352625-17-3	352625-19-5
	352625-20-8	352625-71-9	352625-82-2	352625-83-3	352625-84-4
	352625-85-5	352625-90-2	401793-37-1	528536-87-0	528536-89-2
	528537-03-3	528537-04-4	528537-05-5	528537-06-6	528537-13-5
	528537-17-9	528537-40-8	528537-53-3	528537-55-5	528537-56-6
	528537-57-7	528537-66-8	528538-19-4	528538-23-0	528538-27-4
	528538-29-6	528538-37-6	528538-42-3	528546-20-5	602300-69-6
	681009-83-6	681009-84-7	681009-85-8	681009-86-9	681009-87-0
	681009-88-1	681009-89-2	681009-90-5	681009-91-6	681009-92-7
	681009-93-8	681009-94-9	681009-95-0	681009-96-1	681009-97-2
	681009-98-3	681009-99-4	681010-00-4	681010-01-5	681010-04-8
	681010-86-6	681010-87-7	681010-88-8	681010-89-9	681010-90-2
	681010-91-3	681010-92-4	681010-93-5	681010-94-6	681010-95-7
	681010-96-8	681010-97-9	681010-98-0	681010-99-1	681011-00-7
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	844819-55-2	844819-56-3	844819-57-4	844819-58-5	844819-59-6
	844819-60-9	844819-61-0	844819-63-2	844819-64-3	844819-65-4
	844819-67-6	844819-68-7	844819-69-8	844819-70-1	844819-71-2
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	844819-77-8	844819-78-9	844819-79-0	844819-80-3	844819-81-4
	844819-82-5	844819-83-6	844819-84-7	844819-85-8	844819-86-9
	844819-87-0	844819-88-1	844819-89-2	844819-90-5	844819-91-6
	844819-92-7	844819-93-8	844819-94-9	844819-95-0	844819-96-1
	844819-97-2	844819-98-3	844819-99-4	844820-00-4	844820-01-5
	844820-02-6	844820-03-7	844820-04-8	844820-05-9	844820-06-0
	844820-07-1	844820-08-2	844820-09-3	844820-10-6	844820-11-7
	844820-12-8	844820-13-9	844820-14-0	844820-15-1	844820-16-2
	844820-17-3	844820-18-4	844820-19-5	844820-20-8	844820-21-9

844820-22-0	844820-23-1	844820-27-5	844820-28-6	844820-29-7
844820-30-0	844820-31-1	844820-32-2	844820-33-3	844820-34-4
844820-35-5	844820-36-6	844820-37-7	844820-38-8	844820-39-9
844820-40-2	844820-41-3	844820-42-4	844820-43-5	844820-44-6
844820-45-7	844820-46-8	844820-47-9	844820-48-0	844820-49-1
844820-50-4	844820-51-5	844820-52-6	844820-53-7	844820-54-8
844820-55-9	844820-56-0	844820-57-1	844820-58-2	844820-59-3
844820-60-6	844820-61-7	844820-62-8	844820-63-9	844820-64-0
844820-65-1	844820-66-2	844820-67-3	844820-68-4	844820-69-5
844820-70-8				

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(identification of HLA-restricted CTL epitopes and preparation of polypeptidic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT 9012-90-2 9068-38-6 140779-59-5, GenBank k03455 140779-61-9, GenBank M27323 140779-66-4, GenBank M26727 140779-69-7, GenBank M17451 140779-73-3, GenBank M62320 140825-09-8, GenBank D10112 143388-15-2, GenBank M93258 144531-00-0, GenBank M38429 144932-69-4, GenBank M96155 148311-19-7, GenBank 102317 154168-03-3, GenBank L20587 165872-33-3, GenBank U23487 170550-33-1, GenBank U39362 171711-58-3, GenBank u34604 172022-54-7, GenBank U26546 172444-91-6, GenBank U43141 172961-60-3, GenBank U43096 177301-65-4, GenBank U46016 179710-22-6, GenBank L39106 181013-91-2, GenBank U54771 182114-09-6, GenBank U51188 182114-10-9, GenBank u51189 182114-11-0, GenBank U51190 185127-18-8, GenBank U21135 187000-05-1, GenBank U76035 192841-27-3, GenBank U52953 199317-55-0, GenBank U88822 199317-56-1, GenBank U88823 199317-57-2, GenBank U88824 199317-59-4, GenBank U88826 202081-30-9, GenBank AF004885 205287-39-4, GenBank U71182 207663-42-1, GenBank AF005496 207891-79-0, GenBank AF063223 207891-80-3, GenBank AF063224 209096-02-6, GenBank AF069140 209928-96-1, GenBank AF067154 209928-97-2, GenBank AF067155 209928-98-3, GenBank AF067156 209928-99-4, GenBank AF067157 209929-01-1, GenBank AF067159 210523-56-1, GenBank AJ006022 212427-96-8, GenBank AF061642 217580-46-6, GenBank AF086817 218686-73-8, GenBank AF064699 219020-87-8, GenBank AF069669 219020-88-9, GenBank AF069670 219020-89-0, GenBank AF069671 219020-90-3, GenBank AF069672 219020-91-4, GenBank AF069673 221523-35-9, GenBank AF082394 221523-36-0, GenBank AF082395 222446-55-1, GenBank AF049337 225422-05-9, GenBank AF084936 225433-05-6, GenBank AF110960 225433-07-8, GenBank AF110962 225433-08-9, GenBank AF110963 225433-12-5, GenBank AF110967 225433-14-7, GenBank AF110969 225433-15-8, GenBank AF110970 225433-17-0, GenBank AF110972 225433-18-1, GenBank AF110973 225433-23-8, GenBank AF110978 225433-24-9, GenBank AF110979 225494-65-5, GenBank AJ237565 225905-64-6, GenBank AF119819 225905-65-7, GenBank AF119820 227062-86-4, GenBank AF071473 227062-88-6, GenBank AF071474 227063-48-1, GenBank AF075702 230606-20-9, GenBank AF075701 230606-27-6, GenBank AF076474 230606-28-7, GenBank AF076475 230606-32-3, GenBank AF077336 230606-36-7, GenBank AF076998 233741-66-7, GenBank AF107770 233741-67-8, GenBank AF107771 234418-99-6, GenBank AJ245481 243114-94-5, GenBank AB032740 243114-95-6, GenBank AB032741 244110-67-6, GenBank AB023804 244895-64-5, GenBank AF075703 245101-27-3, GenBank AJ249235 245101-29-5, GenBank AJ249237 245101-30-8, GenBank AJ249238 245101-31-9, GenBank AJ249239 249489-27-8, GenBank AF184155 251337-45-8, GenBank AF190127 251337-46-9, GenBank AF190128 252126-34-4, GenBank AF192135 252176-50-4, GenBank AF193253 252176-51-5, GenBank AF193275 252176-52-6, GenBank AF193276 252176-53-7, GenBank AF193277

252886-46-7, GenBank AF197338      252886-47-8, GenBank AF197339  
 252886-48-9, GenBank AF197340      252886-49-0, GenBank AF197341  
 255355-99-8, GenBank AF146728      256621-31-5, GenBank AF224507  
 260217-43-4, GenBank AJ276596      261486-16-2, GenBank AJ251056  
 269040-57-5, GenBank AJ271445      274661-62-0, GenBank AF179368  
 280540-47-8, GenBank AJ288981      280540-48-9, GenBank AJ288982  
 301988-32-9, GenBank AF276595      304631-29-6, GenBank AF290028  
 336766-38-2, GenBank AJ302646      336766-39-3, GenBank AJ302647  
 343437-47-8, GenBank AF286236      343437-48-9, GenBank AF286237  
 343437-49-0, GenBank AF286238      343437-50-3, GenBank AF286239  
 343437-51-4, GenBank AF316544      372380-60-4, GenBank AF443074  
 372380-61-5, GenBank AF443075      372380-62-6, GenBank AF443076  
 372380-63-7, GenBank AF443077      372380-64-8, GenBank AF443078  
 372380-65-9, GenBank AF443079      372380-66-0, GenBank AF443080  
 372380-67-1, GenBank AF443081      372380-68-2, GenBank AF443082  
 372380-69-3, GenBank AF443083      372380-70-6, GenBank AF443084  
 372380-71-7, GenBank AF443085      372380-72-8, GenBank AF443086  
 372380-73-9, GenBank AF443087      372380-74-0, GenBank AF443088  
 372380-75-1, GenBank AF443089      372380-76-2, GenBank AF443090  
 372380-77-3, GenBank AF443091      372380-78-4, GenBank AF443092  
 372380-79-5, GenBank AF443093      372380-80-8, GenBank AF443094  
 372380-81-9, GenBank AF443095      372380-82-0, GenBank AF443096  
 372380-83-1, GenBank AF443097      372380-84-2, GenBank AF443098  
 372380-85-3, GenBank AF443099      372380-86-4, GenBank AF443100  
 372380-87-5, GenBank AF443101      372380-88-6, GenBank AF443102  
 372380-89-7, GenBank AF443103      372380-90-0, GenBank AF443104  
 372380-91-1, GenBank AF443105      372380-92-2, GenBank AF443106  
 372380-93-3, GenBank AF443107      372380-94-4, GenBank AF443108  
 372380-95-5, GenBank AF443109      372380-96-6, GenBank AF443110  
 372380-97-7, GenBank AF443111      372380-98-8, GenBank AF443112  
 372380-99-9, GenBank AF443113      372381-00-5, GenBank AF443114  
 372381-01-6, GenBank AF443115      381949-12-8, GenBank AJ291718  
 384412-94-6, GenBank K03454      384412-98-0, GenBank X04415      384465-27-4,  
 GenBank K02007      384567-33-3, GenBank L20571      389190-05-0, GenBank M17449  
 392052-04-9, GenBank AF005494      392199-67-6, GenBank U88825      392199-73-4,  
 GenBank AF005495

RL: ARU (Analytical role, unclassified); BSU (Biological study,  
 unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological  
 study)

(identification of HLA-restricted CTL epitopes and preparation of  
 polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and  
 treatment of infectious disease)

IT	161147-58-6	161147-59-7	194039-58-2	710978-82-8	710978-88-4
	710978-95-3	710979-05-8	710979-12-7	710979-19-4	710979-26-3
	790685-61-9	790685-62-0	790685-63-1	790685-64-2	790685-65-3
	790685-66-4	790685-67-5	844820-72-0	844820-76-4	844820-80-0
	844820-83-3	844820-86-6	844820-90-2		

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP  
 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (identification of HLA-restricted CTL epitopes and preparation of  
 polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and  
 treatment of infectious disease)

IT	844512-08-9P	844512-09-0P	844512-10-3P	844512-11-4P	844512-12-5P
	844512-13-6P				

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (nucleotide sequence; identification of HLA-restricted CTL  
 epitopes and preparation of polyepitopic polypeptides or nucleic acids for  
 diagnosis, prognosis and treatment of infectious disease)

IT	844515-21-5	844515-29-3	844517-75-5	844517-76-6	844517-77-7
	844517-78-8	844517-79-9	844517-80-2	844517-81-3	844517-82-4
	<b>844517-83-5</b>	844517-84-6	844517-85-7	844517-86-8	
	844517-87-9	844517-88-0	844517-89-1	844517-90-4	844517-91-5
	844517-92-6	844517-93-7	844517-94-8	844517-95-9	844517-96-0
	844517-97-1	844517-98-2	844517-99-3	844518-00-9	844518-01-0
	844518-02-1	844518-03-2	844518-04-3	844518-05-4	844518-06-5
	844518-07-6	844518-08-7	844518-09-8	844518-10-1	844518-11-2
	844518-12-3	844518-13-4	844702-80-3	844702-81-4	844702-82-5
	844702-83-6	844702-84-7	844702-85-8	844702-86-9	844702-87-0
	844702-95-0	844703-12-4	844703-17-9	844703-18-0	844704-37-6
	844704-38-7				

RL: PRP (Properties)

(unclaimed protein sequence; identification of HLA-restricted  
**CTL** epitopes and preparation of polyepitopic polypeptides or nucleic  
acids for diagnosis, prognosis and treatment of infectious disease)

IT	115538-80-2	119260-99-0	344791-17-9	844512-52-3	844512-53-4
	844512-54-5	844512-55-6	844512-56-7	844512-57-8	844512-58-9
	844512-59-0	844512-60-3	844512-61-4	844512-62-5	844512-63-6
	844512-64-7	844512-65-8	844512-66-9	844512-67-0	844512-68-1
	844512-69-2	844512-70-5	844512-71-6	844512-72-7	844512-73-8
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	844512-89-6	844512-90-9	844512-91-0	844512-92-1	844512-93-2
	844512-94-3	844512-95-4	844512-96-5	844512-97-6	844512-98-7
	844512-99-8	844513-00-4	844513-01-5	844513-02-6	844513-03-7
	844513-04-8	844513-05-9	844513-06-0	844513-07-1	844513-08-2
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	844513-14-0	844513-15-1	844513-16-2	844513-17-3	844513-18-4
	844513-19-5	844513-20-8	844513-21-9	844513-22-0	844513-23-1
	844513-24-2	844513-25-3	844513-26-4	844513-27-5	844513-28-6
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	844513-34-4	844513-35-5	844513-36-6	844513-37-7	844513-38-8
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	844513-49-1	844513-50-4	844513-51-5	844513-52-6	844513-53-7
	844513-54-8	844513-55-9	844513-56-0	844513-57-1	844513-58-2
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	844513-64-0	844513-65-1	844513-66-2	844513-67-3	844513-68-4
	844513-69-5	844513-70-8	844513-71-9	844513-72-0	844513-73-1
	844513-74-2	844513-75-3	844513-76-4	844513-77-5	844513-78-6
	844513-79-7	844513-80-0	844513-81-1	844513-82-2	844513-83-3
	844513-84-4	844513-85-5	844513-86-6	844513-87-7	844513-88-8
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	844514-04-1	844514-05-2	844514-06-3	844514-07-4	844514-08-5
	844514-09-6	844514-10-9	844514-11-0	844514-12-1	844514-13-2
	844514-14-3	844514-15-4	844514-16-5	844514-17-6	844514-18-7
	844514-19-8	844514-20-1	844514-21-2	844514-22-3	844514-23-4
	844514-24-5	844514-25-6	844514-26-7	844514-27-8	844514-28-9
	844514-29-0	844514-30-3	844514-31-4	844514-32-5	844514-33-6
	844514-34-7	844514-35-8	844514-36-9	844514-37-0	844514-38-1
	844514-39-2	844514-40-5	844514-41-6	844514-42-7	844514-43-8
	844514-44-9	844514-45-0	844514-46-1	844514-47-2	844514-48-3
	844514-49-4	844514-50-7	844514-51-8	844514-52-9	844514-53-0
	844514-54-1	844514-55-2	844514-56-3	844514-57-4	844514-58-5
	844514-59-6	844514-60-9	844514-61-0	844514-62-1	844514-63-2
	844514-64-3	844514-65-4	844514-66-5	844514-67-6	844514-68-7

844514-69-8	844514-70-1	844514-71-2	844514-72-3	844514-73-4
844514-74-5	844514-75-6	844514-76-7	844514-78-9	844514-79-0
844514-80-3	844514-81-4	844514-82-5	844514-83-6	844514-84-7
844514-85-8	844514-86-9	844514-87-0	844514-88-1	

RL: PRP (Properties)

(unclaimed sequence; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT	844514-89-2	844514-90-5	844514-91-6	844514-92-7	844514-93-8
	844514-94-9	844514-95-0	844514-96-1	844514-97-2	844514-98-3
	844514-99-4	844515-00-0	844515-01-1	844515-02-2	844515-03-3
	844515-04-4	844515-05-5	844515-06-6	844515-07-7	844515-08-8
	844515-09-9	844515-10-2	844515-11-3	844515-12-4	844515-13-5
	844515-14-6	844515-15-7	844515-16-8	844515-17-9	844515-18-0
	844515-19-1	844515-20-4	844515-22-6	844515-23-7	844515-24-8
	844515-25-9	844515-26-0	844515-27-1	844515-28-2	844515-30-6
	844515-31-7	844515-32-8	844515-33-9	844515-34-0	844515-35-1
	844515-36-2	844515-37-3	844515-38-4	844515-39-5	844515-40-8
	844515-41-9	844515-42-0	844515-43-1	844515-44-2	844515-45-3
	844515-46-4	844515-47-5	844515-48-6	844515-49-7	844515-50-0
	844515-51-1	844515-52-2	844515-53-3	844515-54-4	844515-55-5
	844515-56-6	844515-57-7	844515-58-8	844515-59-9	844515-60-2
	844515-61-3	844515-62-4	844515-63-5	844515-64-6	844515-65-7
	844515-66-8	844515-67-9	844515-68-0	844515-69-1	844515-70-4
	844515-71-5	844515-72-6	844515-73-7	844515-74-8	844515-75-9
	844515-76-0	844515-77-1	844515-78-2	844515-79-3	844515-80-6
	844515-81-7	844515-82-8	844515-83-9	844515-84-0	844515-85-1
	844515-86-2	844515-87-3	844515-88-4	844515-90-8	844515-91-9
	844515-92-0	844515-93-1	844515-94-2	844515-95-3	844516-21-8
	844516-22-9	844516-23-0	844516-24-1	844516-25-2	844516-26-3
	844516-27-4	844516-28-5	844516-29-6	844516-30-9	844516-31-0
	844516-32-1	844516-33-2	844516-34-3	844516-35-4	844516-36-5
	844516-37-6	844516-38-7	844516-39-8	844516-40-1	844516-41-2
	844516-42-3	844516-43-4	844516-44-5	844516-45-6	844516-46-7
	844516-47-8	844516-48-9	844516-49-0	844516-50-3	844516-51-4
	844516-52-5	844516-53-6	844516-54-7	844516-55-8	844516-56-9
	844516-57-0	844516-58-1	844516-59-2	844516-60-5	844516-61-6
	844516-62-7	844516-63-8	844516-64-9	844516-65-0	844516-66-1
	844516-67-2	844516-68-3	844516-69-4	844516-70-7	844516-71-8
	844516-72-9	844516-73-0	844516-74-1	844516-75-2	844516-76-3
	844516-77-4	844516-78-5	844516-79-6	844516-80-9	844516-81-0
	844516-82-1	844516-83-2	844516-84-3	844516-85-4	844516-86-5
	844516-87-6	844516-88-7	844516-89-8	844516-90-1	844516-91-2
	844516-92-3	844516-93-4	844516-94-5	844516-95-6	844516-96-7
	844516-97-8	844516-98-9	844516-99-0	844517-00-6	844517-01-7
	844517-02-8	844517-03-9	844517-04-0	844517-05-1	844517-06-2
	844517-07-3	844517-08-4	844517-09-5	844517-10-8	844517-11-9
	844517-12-0	844517-13-1	844517-14-2	844517-15-3	844517-16-4
	844517-17-5	844517-18-6	844517-19-7	844517-20-0	844517-21-1
	844517-22-2	844517-23-3	844517-24-4	844517-25-5	844517-26-6
	844517-27-7	844517-28-8	844517-29-9	844517-30-2	844517-31-3
	844517-32-4	844517-33-5	844517-34-6	844517-35-7	844517-36-8
	844517-37-9	844517-38-0	844517-39-1	844517-40-4	844517-41-5
	844517-42-6	844517-43-7	844517-44-8	844517-45-9	844517-46-0
	844517-47-1	844517-48-2	844517-49-3	844517-50-6	844517-51-7
	844517-52-8	844517-53-9	844517-54-0	844517-55-1	

RL: PRP (Properties)

(unclaimed sequence; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT	844517-56-2	844517-57-3	844517-58-4	844517-59-5	844517-60-8
	844517-61-9	844517-62-0	844517-63-1	844517-64-2	844517-65-3
	844517-66-4	844517-67-5	844517-68-6	844517-69-7	844517-70-0
	844517-71-1	844517-72-2	844517-73-3	<b>844517-74-4</b>	
	844518-14-5	844518-15-6	844518-16-7	844518-17-8	844518-18-9
	844518-19-0	844518-20-3	844518-21-4	844518-22-5	844518-23-6
	844518-24-7	844518-25-8	844518-26-9	844518-27-0	844518-28-1
	844518-29-2	844518-30-5	844518-31-6	844518-32-7	844518-33-8
	844518-34-9	844518-35-0	844518-36-1	844518-37-2	844518-38-3
	844518-39-4	844518-40-7	844518-41-8	844518-42-9	844518-43-0
	844518-44-1	844518-45-2	844518-46-3	844518-47-4	844518-48-5
	844518-49-6	844518-50-9	844518-51-0	844518-52-1	844518-53-2
	844518-54-3	844518-55-4	844518-56-5	844518-57-6	844518-58-7
	844518-59-8	844518-60-1	844518-61-2	844518-62-3	844518-63-4
	844518-64-5	844518-65-6	844518-66-7	844518-67-8	844518-68-9
	844518-69-0	844518-70-3	844518-71-4	844518-72-5	844518-73-6
	844518-74-7	844518-75-8	844518-76-9	844518-77-0	844518-78-1
	844518-79-2	844518-80-5	844518-81-6	844518-82-7	844518-83-8
	844518-84-9	844518-85-0	844518-86-1	844518-87-2	844518-88-3
	844518-89-4	844518-90-7	844518-91-8	844518-92-9	844518-93-0
	844518-94-1	844518-95-2	844518-96-3	844518-97-4	844518-98-5
	844518-99-6	844519-00-2	844519-01-3	844519-02-4	844519-03-5
	844519-04-6	844519-05-7	844519-06-8	844519-07-9	844519-08-0
	844519-09-1	844519-10-4	844519-11-5	844519-12-6	844519-13-7
	844519-14-8	844519-15-9	844519-16-0	844519-17-1	844519-18-2
	844519-19-3	844519-20-6	844519-21-7	844519-22-8	844519-23-9
	844519-24-0	844519-25-1	844519-26-2	844519-27-3	844519-28-4
	844519-29-5	844519-30-8	844519-31-9	844519-32-0	844519-33-1
	844519-34-2	844519-35-3	844519-36-4	844519-37-5	844519-38-6
	844519-39-7	844519-40-0	844519-41-1	844519-42-2	844519-43-3
	844519-44-4	844519-45-5	844519-46-6	844519-47-7	844519-48-8
	844519-49-9	844519-50-2	844519-51-3	844519-52-4	844702-96-1
	844702-97-2	844702-98-3	844702-99-4	844703-00-0	844703-01-1
	844703-02-2	844703-03-3	844703-04-4	844703-05-5	844703-06-6
	844703-07-7	844703-08-8	844703-09-9	844703-10-2	844703-11-3
	844703-13-5	844703-14-6	844703-15-7	844703-16-8	844703-19-1
	844703-20-4	844703-21-5	844703-22-6	844703-23-7	844703-24-8
	844703-25-9	844703-26-0	844703-27-1	844703-28-2	844703-29-3
	844703-30-6	844703-31-7	844703-32-8	844703-33-9	844703-34-0
	844703-35-1	844703-36-2	844703-37-3	844703-38-4	844703-39-5
	844703-40-8	844703-41-9	844703-42-0	844703-44-2	844703-45-3
	844703-46-4	844703-47-5	844703-48-6	844703-49-7	844703-50-0
	844703-51-1	844703-52-2	844703-53-3	844703-54-4	844703-55-5
	844703-56-6	844703-57-7	844703-58-8	844703-59-9	844703-60-2
	844703-61-3	844703-62-4	844703-63-5	844703-64-6	844703-65-7
	844703-66-8	844703-67-9	844703-68-0	844703-69-1	844703-70-4
	844703-71-5	844703-72-6	844703-73-7	844703-74-8	844703-75-9
	844703-76-0	844703-77-1	844703-78-2	844703-79-3	844703-80-6

RL: PRP (Properties)

(unclaimed sequence; identification of HLA-restricted CTL

epitopes and preparation of polypeptidic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT	844703-81-7	844703-82-8	844703-83-9	844703-84-0	844703-85-1
	844703-86-2	844703-87-3	844703-88-4	844703-89-5	844703-90-8
	844703-91-9	844703-92-0	844703-93-1	844703-94-2	844703-95-3
	844703-96-4	844703-97-5	844703-98-6	844703-99-7	844704-00-3
	844704-01-4	844704-02-5	844704-03-6	844704-04-7	844704-05-8
	844704-06-9	844704-07-0	844704-08-1	844704-09-2	844704-10-5
	844704-11-6	844704-12-7	844704-13-8	844704-14-9	844704-15-0
	844704-16-1	844704-17-2	844704-18-3	844704-19-4	844704-20-7

844704-22-9	844704-23-0	844704-24-1	844704-25-2	844704-26-3
844704-27-4	844704-28-5	844704-29-6	844704-30-9	844704-31-0
844704-32-1	844704-33-2	844704-34-3	844704-35-4	844704-36-5
844704-39-8	844704-40-1	844704-41-2	844704-42-3	844704-43-4
844704-44-5	844704-45-6	844704-46-7	844704-47-8	844704-48-9
844704-49-0	844704-50-3	844704-51-4	844704-52-5	844704-53-6
844704-54-7	844704-55-8	844704-56-9	844704-57-0	844704-58-1
844704-59-2	844704-60-5	844704-61-6	844704-62-7	844704-63-8
844704-64-9	844704-65-0	844704-66-1	844704-67-2	844704-68-3
844704-69-4	844704-70-7	844704-71-8	844704-72-9	844704-73-0
844704-74-1	844704-75-2	844704-76-3	844704-77-4	844704-78-5
844704-79-6	844704-80-9	844704-81-0	844704-82-1	844704-83-2
844704-84-3	844704-85-4	844704-86-5	844704-87-6	844704-88-7
844704-89-8	844704-90-1	844704-91-2	844704-92-3	844704-93-4
844704-94-5	844704-95-6	844704-96-7	844704-97-8	844704-98-9
844704-99-0	844705-00-6	844705-01-7	844705-02-8	844705-03-9
844705-04-0	844705-05-1	844705-06-2	844705-07-3	844705-08-4
844705-09-5	844705-10-8	844705-11-9	844705-12-0	844705-13-1
844705-14-2	844705-15-3	844705-16-4	844705-17-5	844705-18-6
844705-19-7	844705-20-0	844705-21-1	844705-22-2	844705-23-3
844705-24-4	844705-25-5	844705-26-6	844705-27-7	844705-28-8
844705-29-9	844705-30-2	844705-31-3	844705-32-4	844705-33-5
844705-34-6	844705-35-7	844705-36-8	844705-37-9	844705-38-0
844705-39-1	844705-40-4	844705-41-5	844705-42-6	844705-43-7
844705-44-8	844705-45-9	844705-46-0	844705-47-1	844705-48-2
844705-49-3	844705-50-6	844705-51-7	844705-52-8	844705-53-9
844705-54-0	844705-55-1	844705-56-2	844705-57-3	844705-58-4
844705-59-5	844705-60-8	844705-61-9	844705-62-0	844705-63-1
844705-64-2	844705-65-3	844705-66-4	844705-67-5	844705-68-6
844705-69-7	844705-70-0	844705-71-1	844705-72-2	844705-73-3
844705-74-4	844705-75-5	844705-76-6	844705-77-7	844705-78-8
844705-79-9	844705-80-2	844705-81-3	844705-82-4	844705-83-5
844705-84-6	844705-85-7	844705-86-8	844705-87-9	844705-88-0
844705-89-1	844705-90-4	844705-91-5	844705-92-6	844705-93-7
844705-94-8	844705-95-9	844705-96-0	844705-97-1	844705-98-2
844705-99-3	844706-00-9	844706-01-0	844706-02-1	844706-03-2
844706-04-3	844706-05-4	844706-06-5	844706-07-6	844706-08-7
844706-09-8	844706-10-1	844706-11-2	844706-12-3	844706-13-4
844706-14-5	844706-15-6	844706-16-7	844706-17-8	
844706-18-9	844706-19-0	844706-20-3	844706-21-4	
844706-22-5				

RL: PRP (Properties)

(unclaimed sequence; identification of HLA-restricted CTL epitopes and preparation of polypeptidic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT	844706-23-6	844706-24-7	844706-25-8	844706-26-9	844706-27-0
	844706-28-1	844706-29-2	844706-30-5	844706-31-6	
	844706-32-7	844706-33-8	844706-34-9	844706-35-0	844706-36-1
	844706-37-2	844706-38-3	844706-39-4		
	844706-40-7	844706-41-8	844706-42-9		
	844706-43-0	844706-44-1	844706-45-2		
	844706-46-3	844706-47-4	844706-48-5	844706-49-6	
	844706-50-9	844706-51-0	844706-52-1		
	844706-53-2	844706-54-3	844706-55-4		
	844706-56-5	844706-57-6	844706-58-7		
	844706-59-8	844706-60-1	844706-61-2	844706-62-3	844706-63-4
	844706-64-5	844706-65-6	844706-66-7	844706-67-8	
	844706-68-9	844706-69-0	844706-70-3	844706-71-4	844706-72-5
	844706-73-6	844706-74-7	844706-75-8	844706-76-9	844706-77-0
	844706-78-1	844706-79-2	844706-80-5	844706-81-6	844706-82-7

<b>844706-83-8</b>	<b>844706-84-9</b>	844706-85-0	844706-86-1	
844706-87-2	844706-88-3	844706-89-4	844706-90-7	844706-91-8
844706-92-9	844706-93-0	844706-94-1	844706-95-2	844706-96-3
844706-97-4	<b>844706-98-5</b>	844706-99-6	844707-00-2	
844707-01-3	<b>844707-02-4</b>	<b>844707-03-5</b>		
<b>844707-04-6</b>	844707-05-7	844707-06-8	844707-07-9	
844707-08-0	844707-09-1	844707-10-4	844707-11-5	844707-12-6
844707-13-7	844707-14-8	844707-15-9	844707-16-0	844707-17-1
844707-18-2	844707-19-3	844707-20-6	844707-21-7	844707-22-8
844707-23-9	844707-24-0	844707-25-1	844707-26-2	844707-27-3
844707-28-4	844707-29-5	844707-30-8	844707-31-9	844707-32-0
844707-33-1	844707-34-2	844707-35-3	844707-36-4	844707-37-5
844707-38-6	844707-39-7	844707-40-0	844707-41-1	844707-42-2
844707-43-3	844707-44-4	844707-45-5	844707-46-6	844707-47-7
844707-48-8	844707-49-9	844707-50-2	844707-51-3	844707-52-4
844707-53-5	844707-54-6	844707-55-7	844707-56-8	844707-57-9
844707-58-0	844707-59-1	844707-60-4	844707-61-5	844707-62-6
844707-63-7	844707-64-8	844707-65-9	844707-66-0	844707-67-1
844707-68-2	844707-69-3	844707-70-6	844707-71-7	844707-72-8
844707-73-9	844707-74-0	844707-75-1	844707-76-2	844707-77-3
844707-78-4	844707-79-5	844707-80-8	844707-81-9	844707-82-0
844707-83-1	844707-84-2	844707-85-3	844707-86-4	844707-87-5
844707-88-6	844707-89-7	844707-90-0	844707-91-1	844707-92-2
844707-93-3	844707-94-4	844707-95-5	844707-96-6	844707-97-7
844707-98-8	844707-99-9	844708-00-5	844708-01-6	844708-02-7
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RL: PRP (Properties)

(unclaimed sequence; identification of HLA-restricted CTL

epitopes and preparation of polypeptidic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

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RL: PRP (Properties)

(unclaimed sequence; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

IT 844517-83-5

RL: PRP (Properties)

(unclaimed protein sequence; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

RN 844517-83-5 HCAPLUS

CN 9: PN: WO2005012502 PAGE: 333 unclaimed protein (9CI) (CA INDEX NAME)

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RL: PRP (Properties)

(unclaimed sequence; identification of HLA-restricted CTL epitopes and preparation of polyepitopic polypeptides or nucleic acids for diagnosis, prognosis and treatment of infectious disease)

RN 844517-74-4 HCAPLUS

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L14 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:905875 HCAPLUS

DOCUMENT NUMBER: 141:390793

TITLE: Compositions and methods for inhibiting binding of MUC1 to PDZ domains and uses in enhancing sensitivity of MUC1 expressing cancer cells to chemotherapeutic agents

INVENTOR(S): Belmares, Michael P.; Lu, Peter S.; Garman, Jonathan David; Jecminek, Albert A.; Kharbanda, Surrender; Agata, Naoki; Kufe, Donald W.

PATENT ASSIGNEE(S): Ilex Products, Inc., USA; Arbor Vita Corporation; Dana-Farber Cancer Institute

SOURCE: PCT Int. Appl., 141 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004092339	A2	20041028	WO 2004-US11195	20040412
WO 2004092339	A3	20050512		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,			

ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
TD, TG

PRIORITY APPLN. INFO.:

US 2003-462111P P 20030411  
US 2003-467728P P 20030502  
US 2003-475595P P 20030604  
US 2003-502111P P 20030911  
US 2003-524188P P 20031121

ED Entered STN: 29 Oct 2004

AB The present invention provides compns. and methods for inhibiting the binding of the carboxy-terminus of MUC1 to PDZ domain(s) and to enhance the sensitivity of MUC1 expressing cancer cells to chemotherapeutic agents. Specifically, the PDZ domains may suitably be ZO-1 d2, SIP1 dL, LIM MYSTIQUE, AIPC, KIAA0751, MAST2, PRIL-16 dL, GRIP2 d5, SITAC 18, NSP or KIAA1526 dL, and wherein the PDZ domain may be within a MUC1-expressing cancer. The method of enhancing the sensitivity of cancer cells to chemotherapeutic agents comprises contacting the cells with an effective amount of an agent that inhibits the binding of MUC1 to a PDZ domain.

IC C12N

CC 6-1 (General Biochemistry)

Section cross-reference(s): 1, 9

IT Protein motifs

(cytoplasmic domain, PDZ domain, ZO-1 d2, SIP1 d1, LIM MYSTIQUE, AIPC, KIAA0751, MAST2, PRIL-16, GRIP2 d5, SITAC 18, NSP, KIAA1526 dL; inhibiting binding of MUC1 to PDZ domains)

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RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)

(amino acid sequence; compns. and methods for inhibiting binding of

MUC1 to PDZ domains and uses in enhancing sensitivity of MUC1  
expressing cancer cells to chemotherapeutic agents)

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PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)

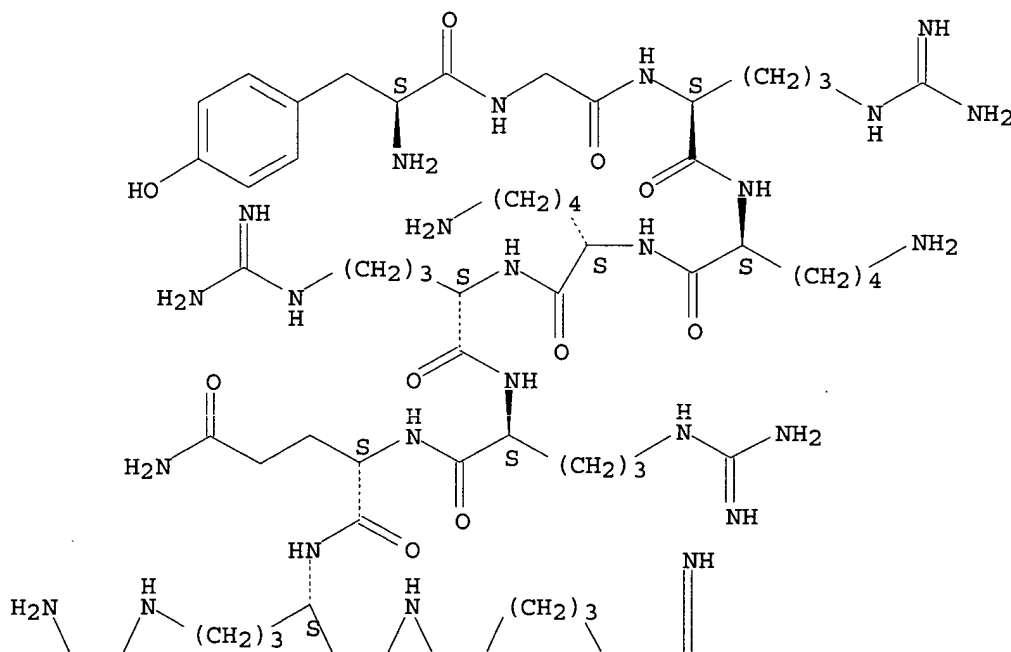
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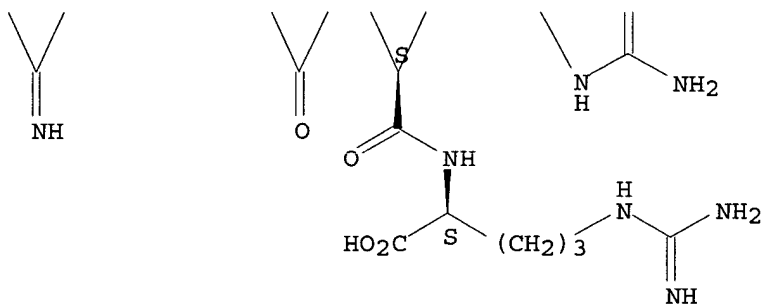
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Absolute stereochemistry.

PAGE 1-A



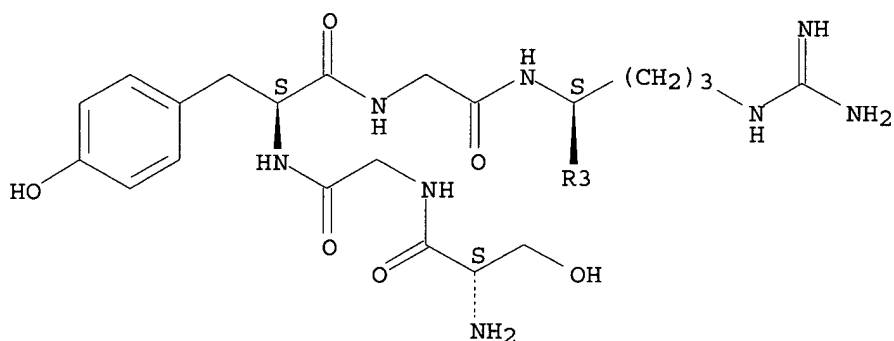
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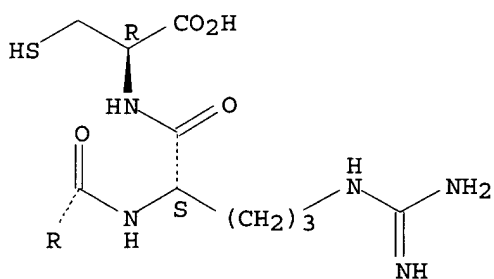
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Absolute stereochemistry.

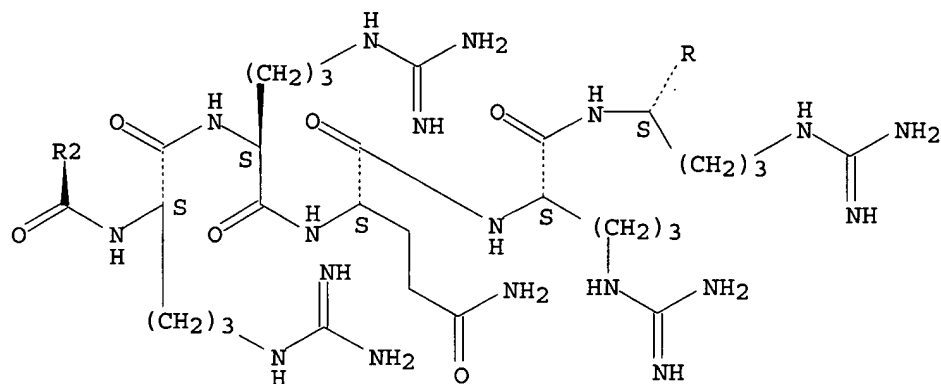
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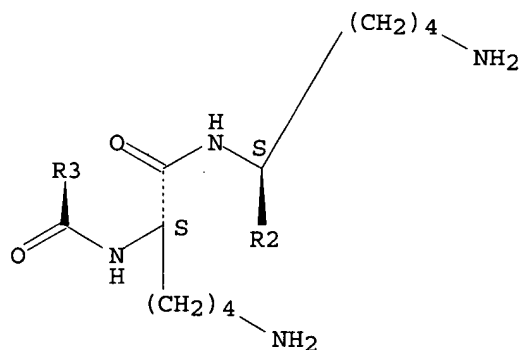
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PAGE 3-A



PAGE 4-A

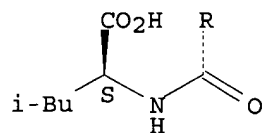
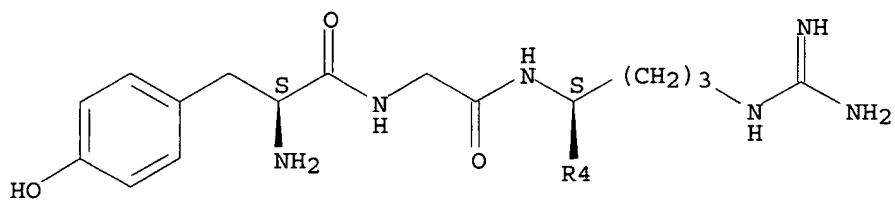


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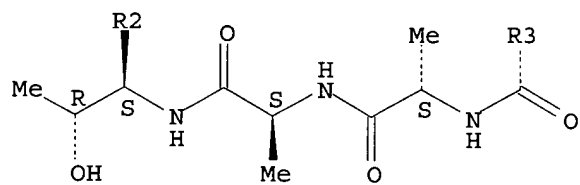
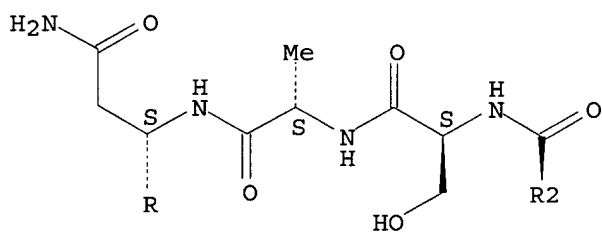
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Absolute stereochemistry.

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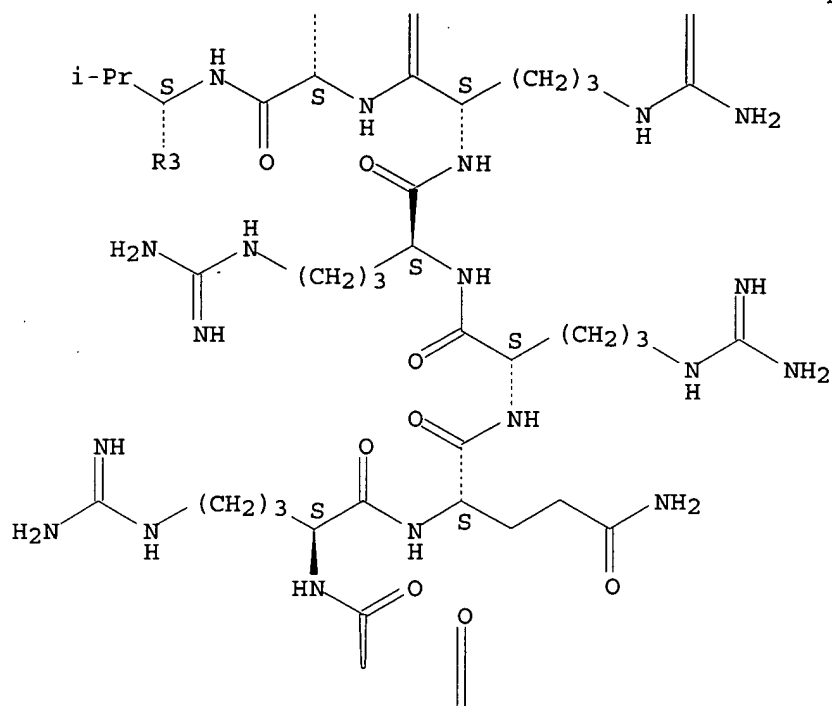


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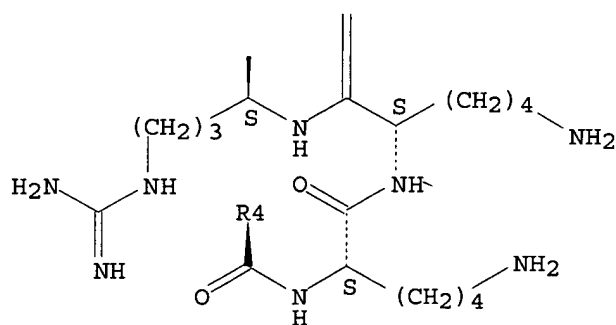




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PAGE 4-A

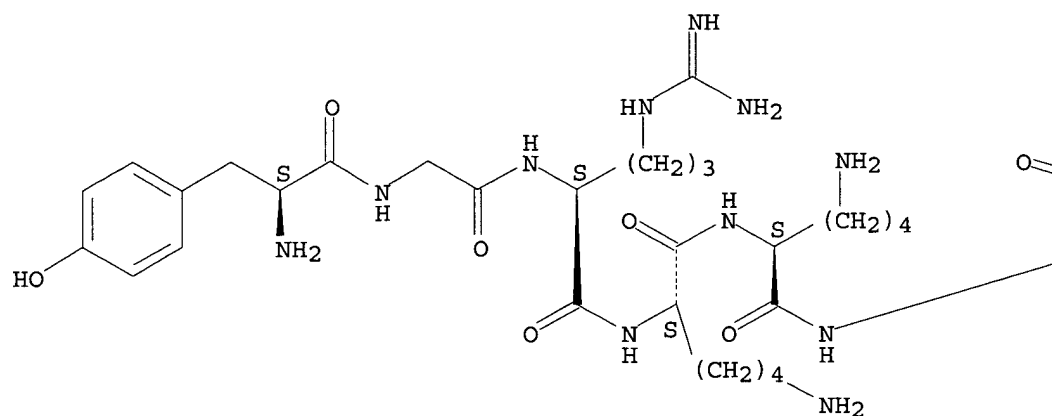


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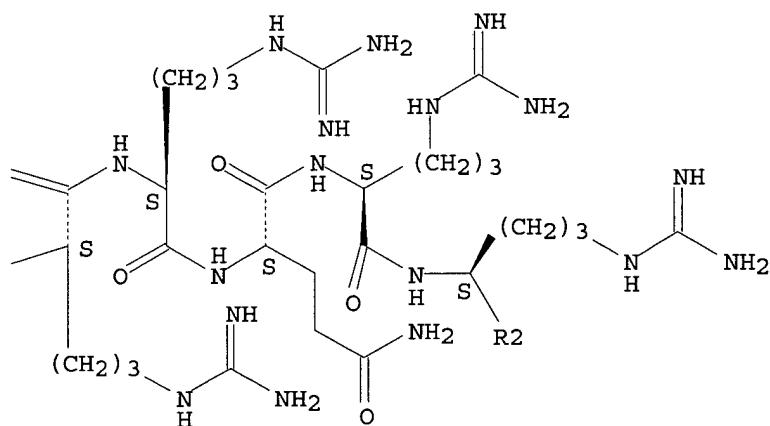
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Absolute stereochemistry.

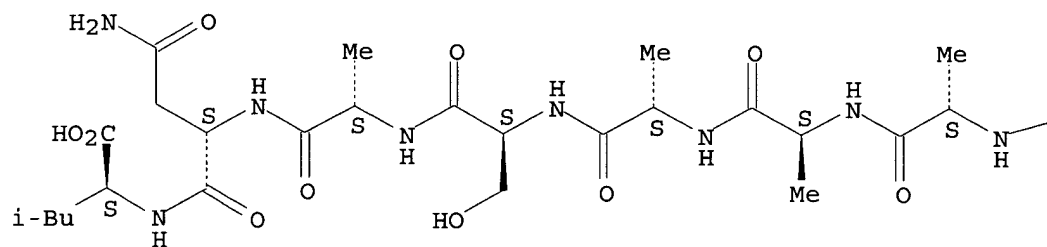
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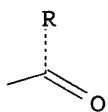
PAGE 1-B



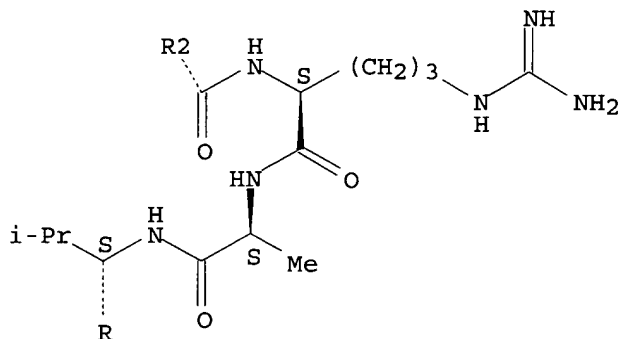
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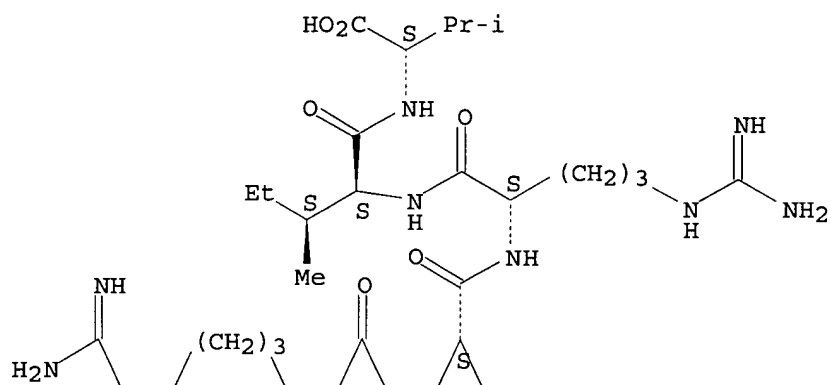
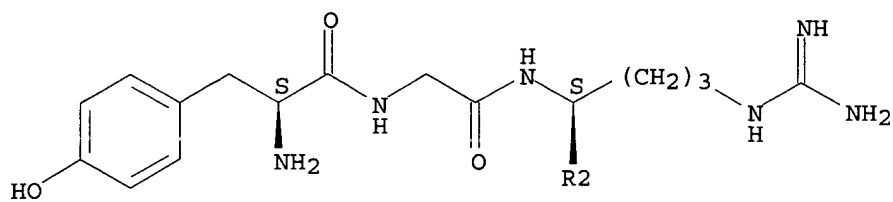


RN 785804-89-9 HCAPLUS

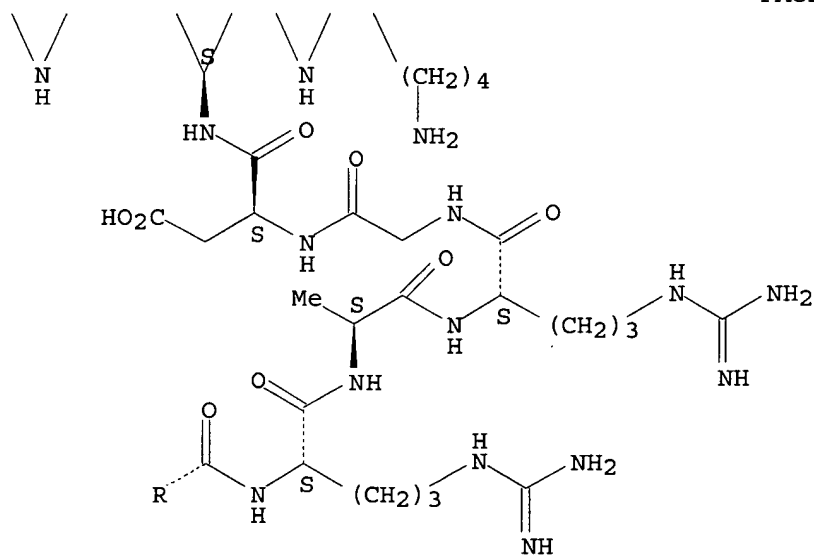
CN L-Valine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arginylglycyl-L- $\alpha$ -aspartyl-L-arginyl-L-lysyl-L-arginyl-L-isoleucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

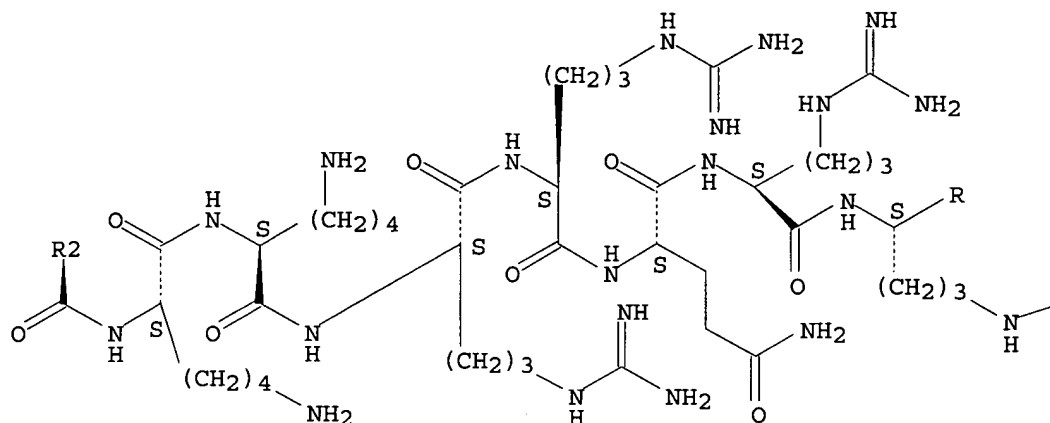
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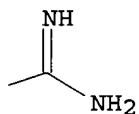
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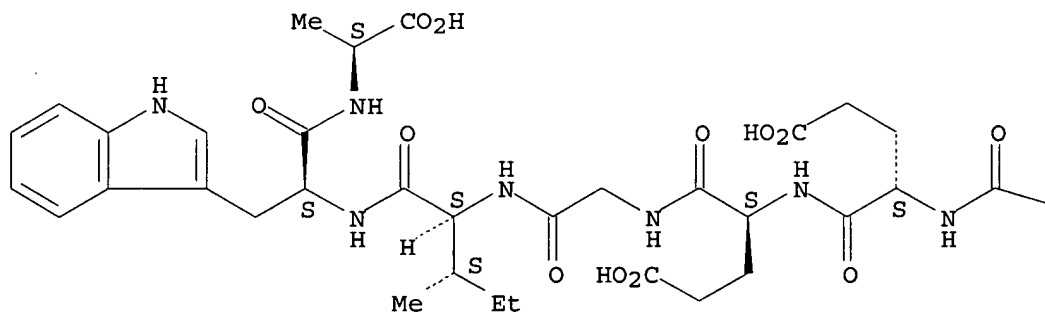


RN 785804-90-2 HCAPLUS

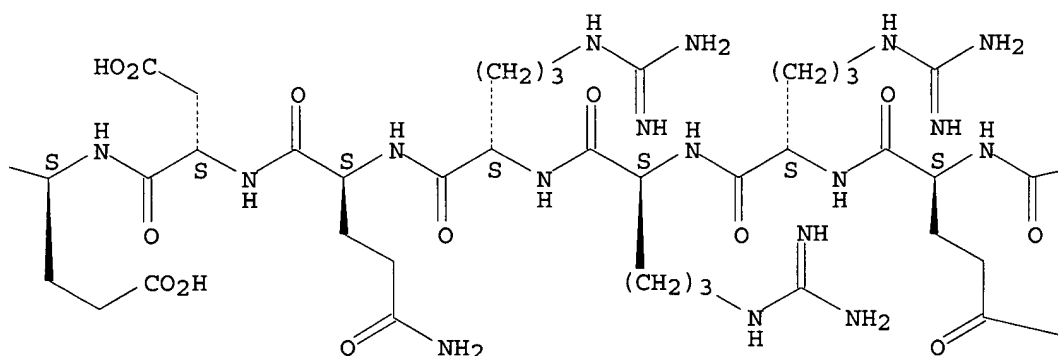
CN L-Alanine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-glutaminyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L- $\alpha$ -glutamyl-L- $\alpha$ -glutamylglycyl-L-isoleucyl-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

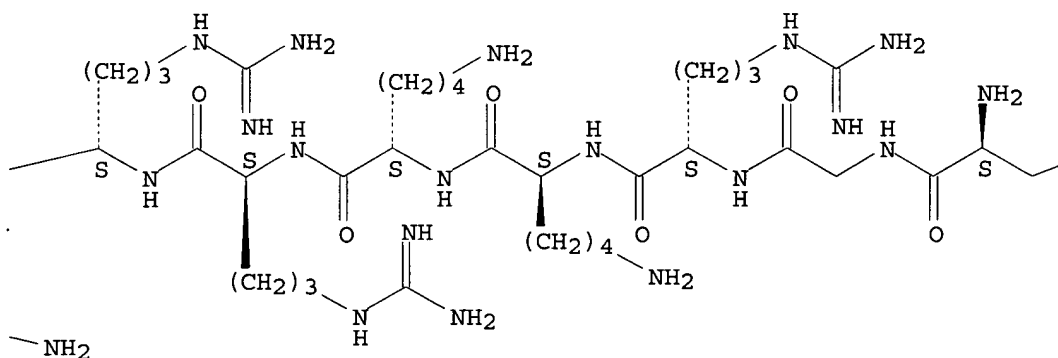
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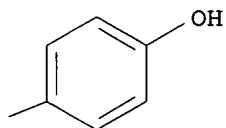
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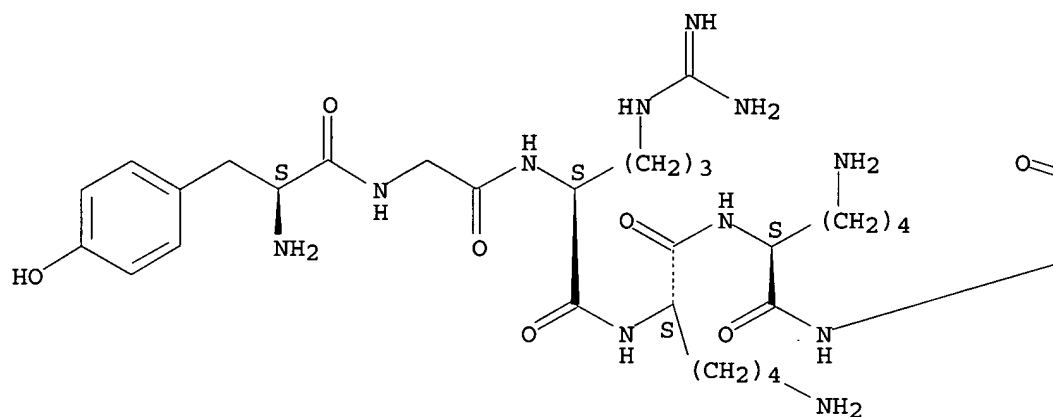


RN 785804-91-3 HCAPLUS

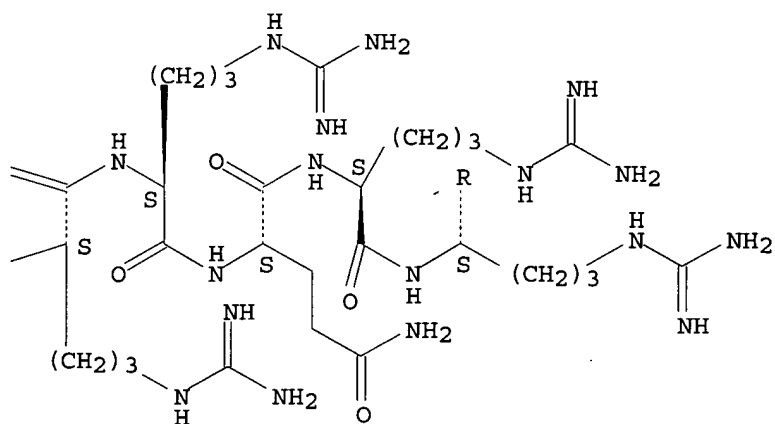
CN L-Leucine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-valyl-L-alanyl-L-alanyl-L-threonyl-L-seryl-L-isoleucyl-L-asparaginy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

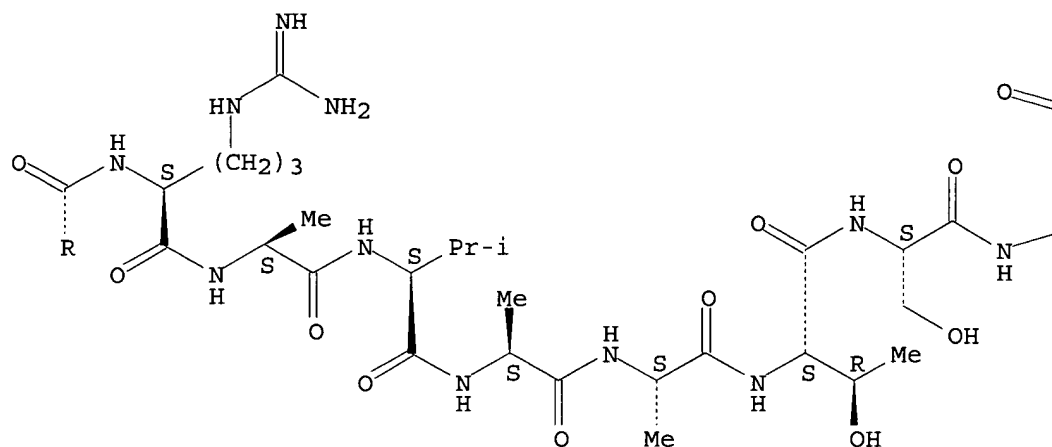
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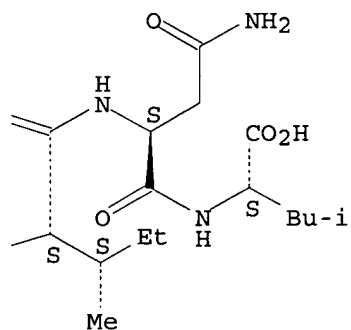
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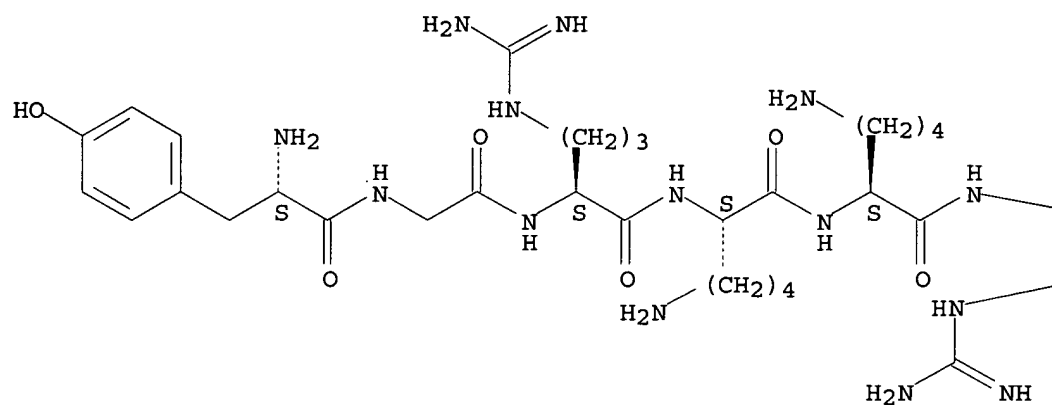
RN 785804-92-4 HCAPLUS

CN L-Leucine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutamyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-valyl-L-alanyl-L-alanyl-L-threonyl-L-tyrosyl-L-seryl-L-asparaginyl- (9CI) (CA INDEX NAME)

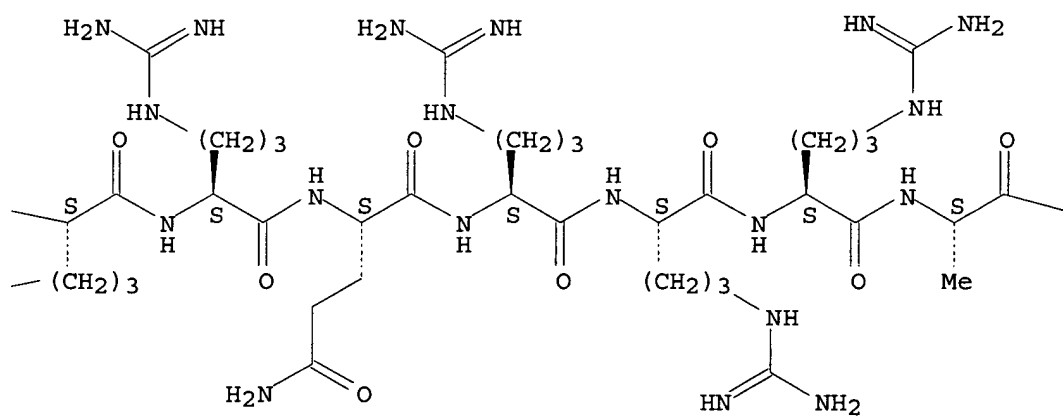
Absolute stereochemistry.



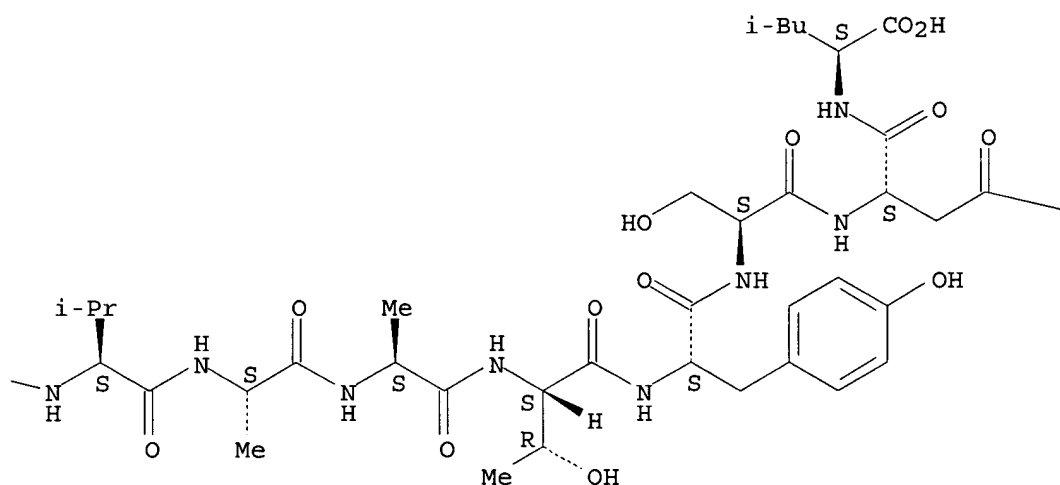
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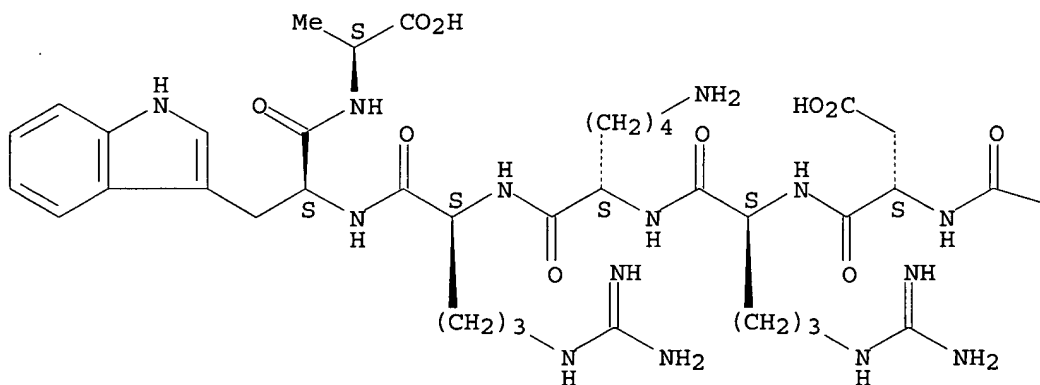


RN 785804-93-5 HCAPLUS

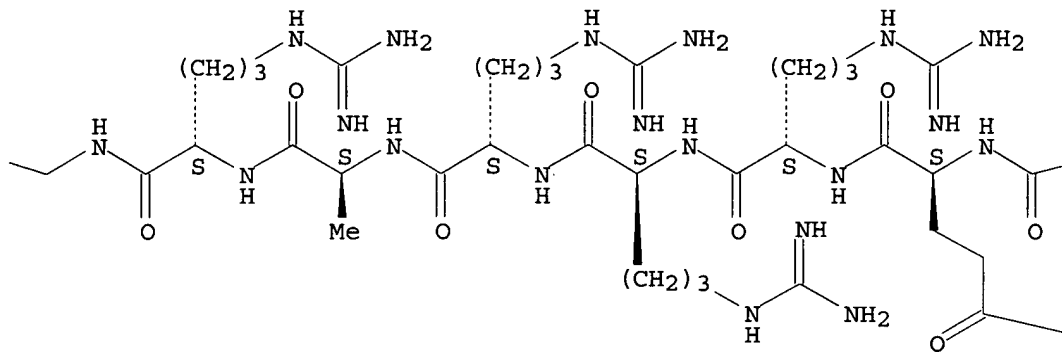
CN L-Alanine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminy-L-arginyl-L-arginyl-L-alanyl-L-arginylglycyl-L- $\alpha$ -aspartyl-L-arginyl-L-lysyl-L-arginyl-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

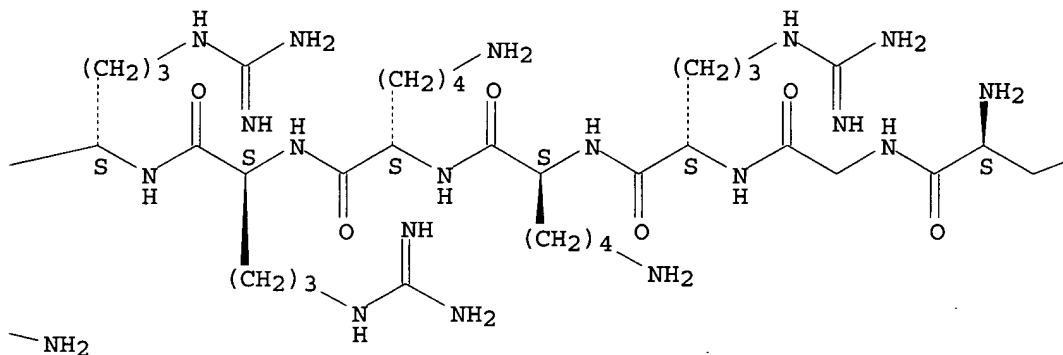
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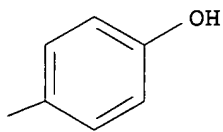
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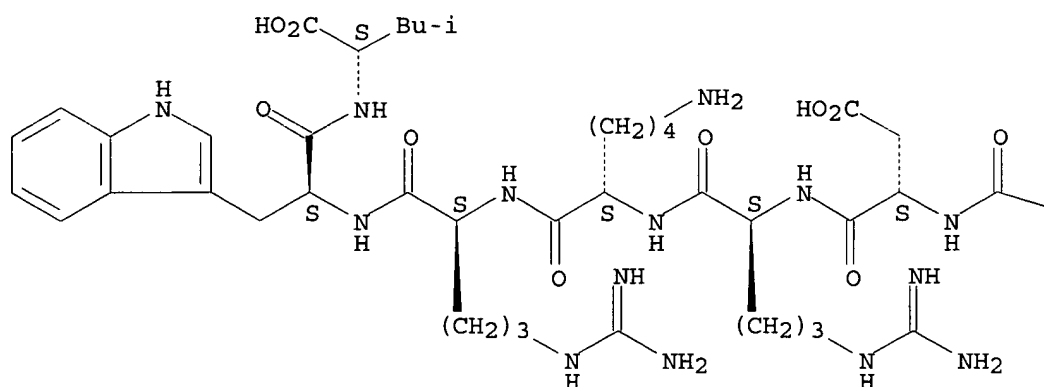


RN 785804-94-6 HCAPLUS

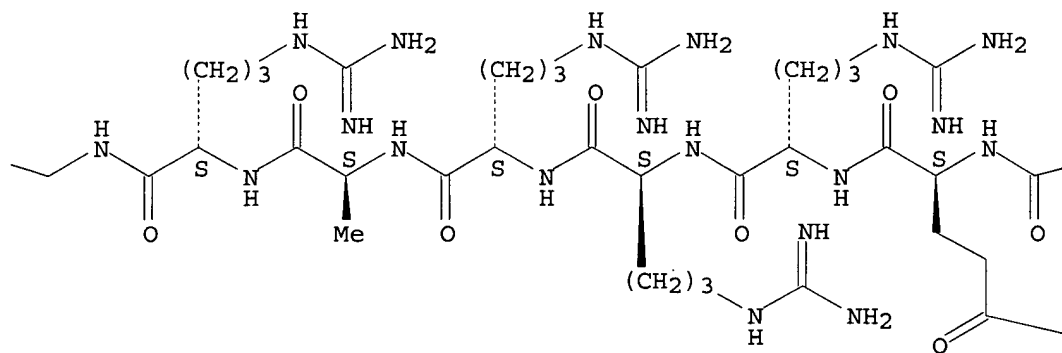
CN L-Leucine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arginylglycyl-L- $\alpha$ -aspartyl-L-arginyl-L-lysyl-L-arginyl-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

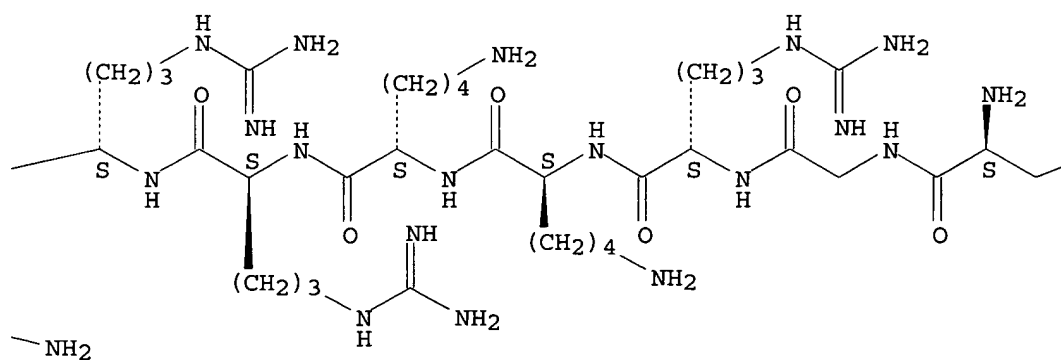
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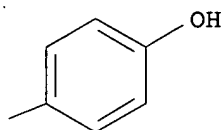
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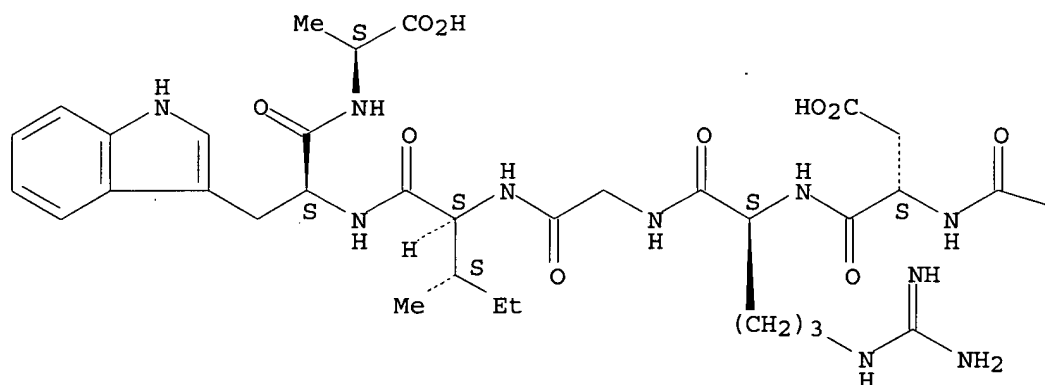


RN 785804-95-7 HCAPLUS

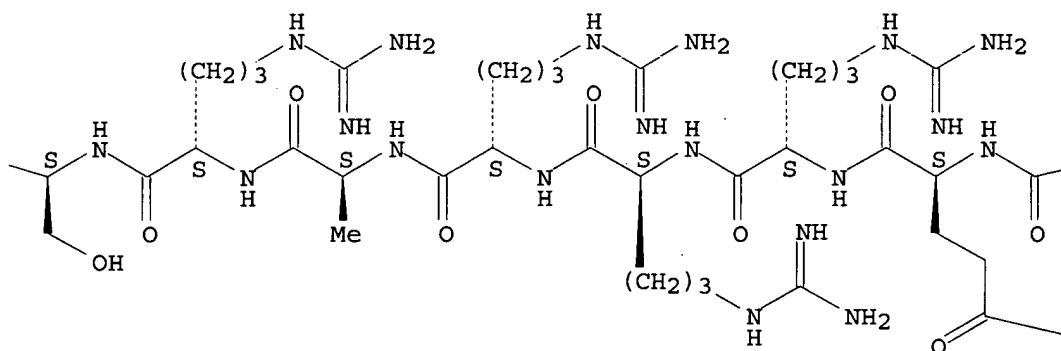
CN L-Alanine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arginyl-L-seryl-L- $\alpha$ -aspartyl-L-arginylglycyl-L-isoleucyl-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

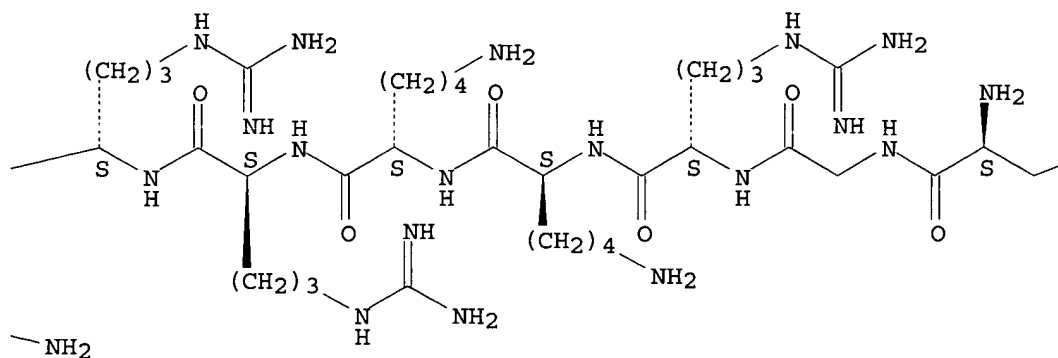
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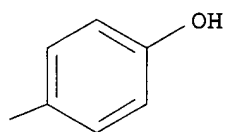
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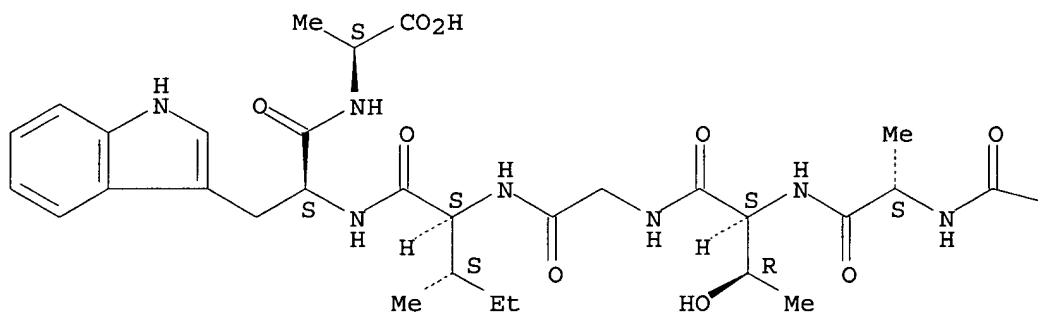


RN 785804-96-8 HCAPLUS

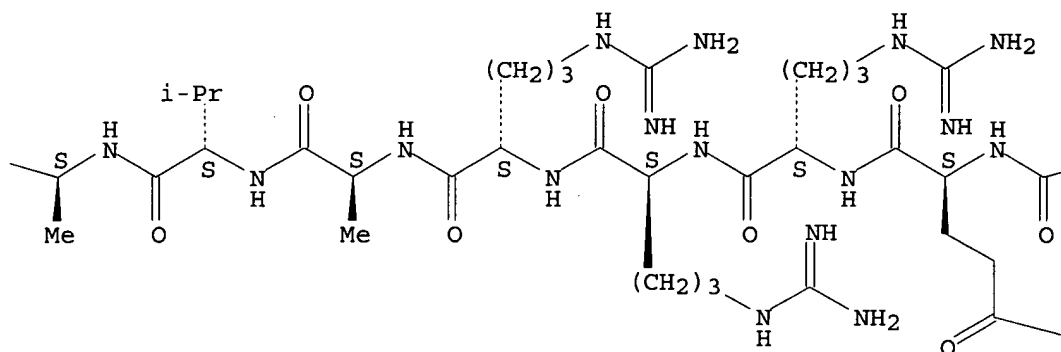
CN L-Alanine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutamyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-valyl-L-alanyl-L-alanyl-L-threonylglycyl-L-isoleucyl-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

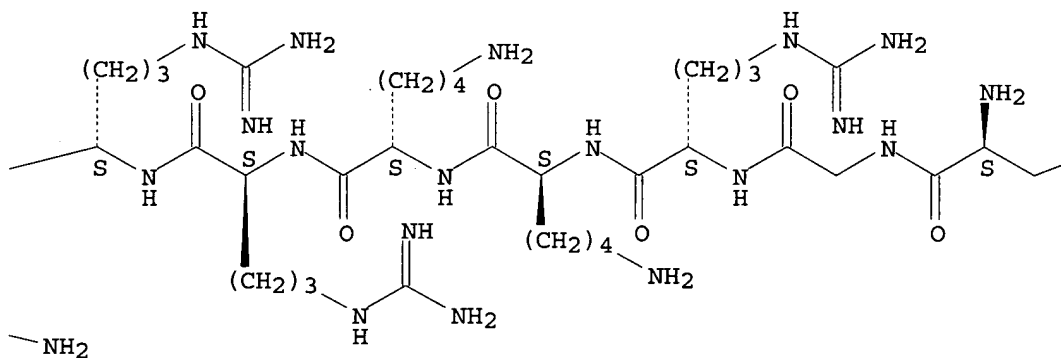
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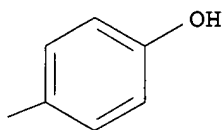
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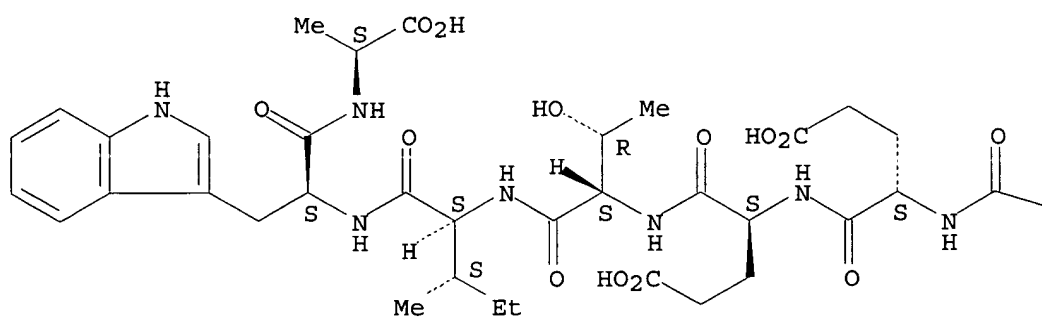


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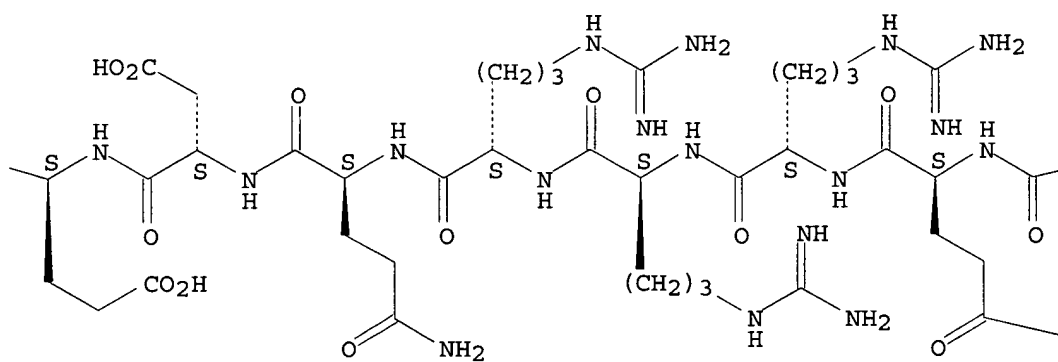
CN L-Alanine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-glutaminyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L- $\alpha$ -glutamyl-L- $\alpha$ -glutamyl-L-threonyl-L-isoleucyl-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

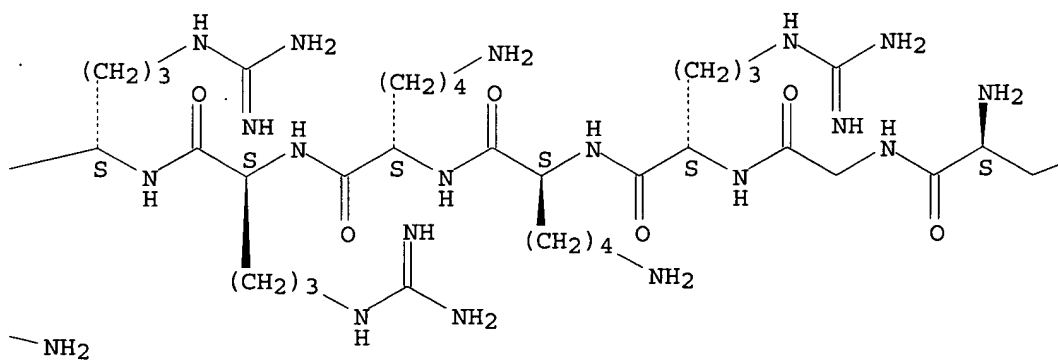
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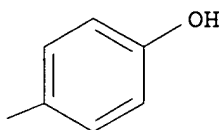


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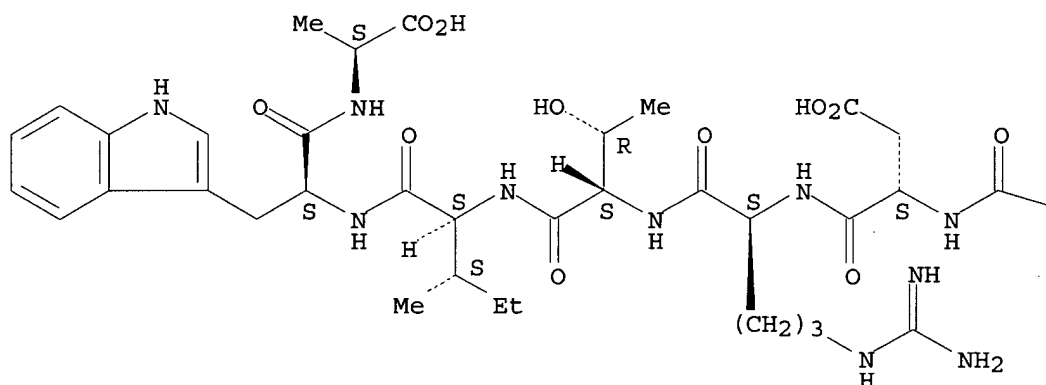


RN 785804-98-0 HCAPLUS

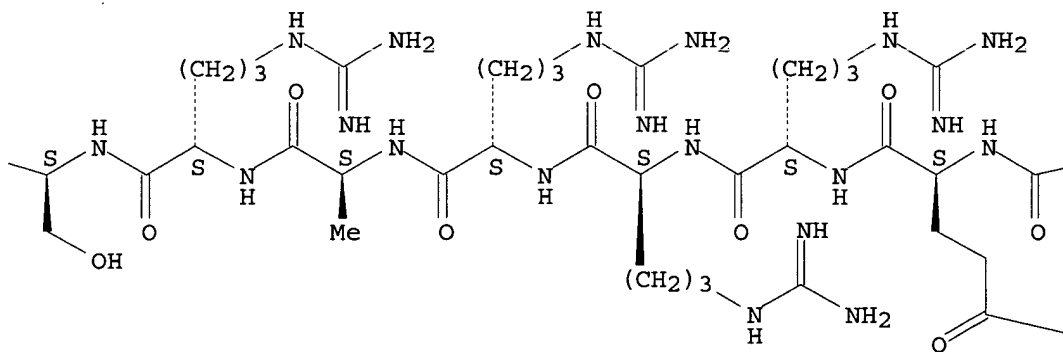
CN L-Alanine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutamyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arginyl-L-seryl-L- $\alpha$ -aspartyl-L-arginyl-L-threonyl-L-isoleucyl-L-tryptophyl- (9CI) (CA INDEX NAME)

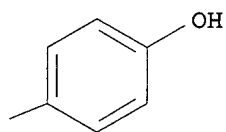
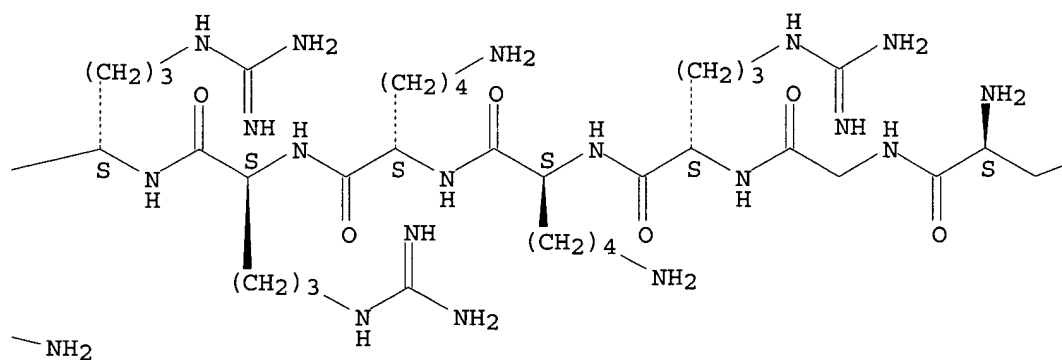
Absolute stereochemistry.

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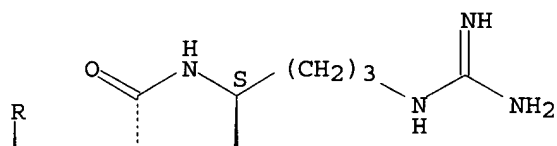
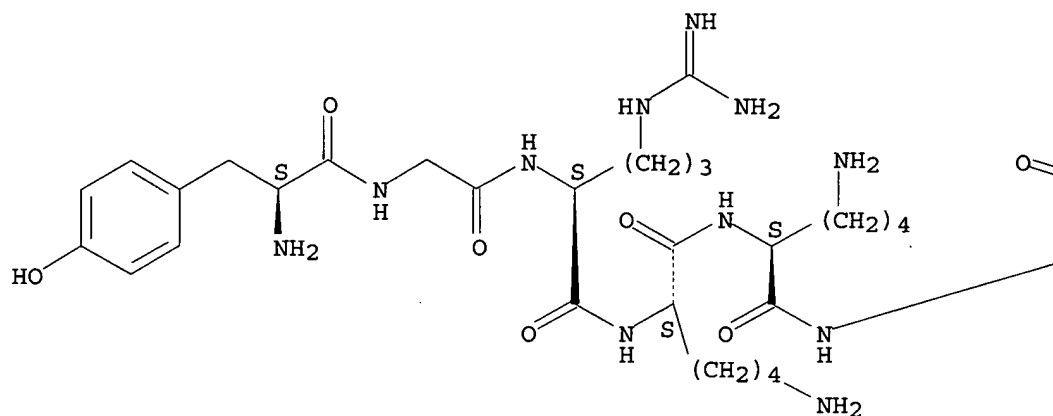




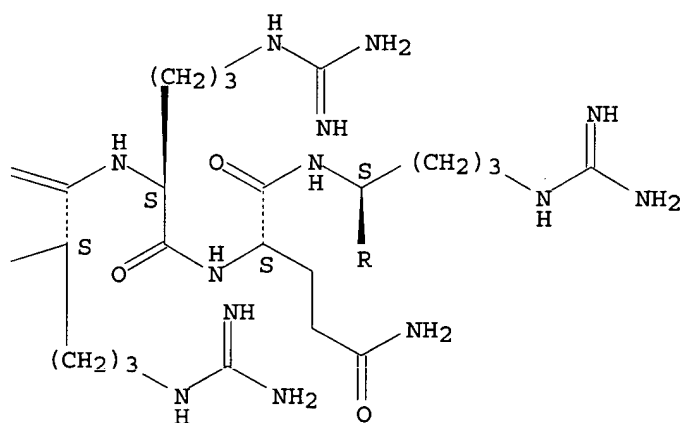
RN 785804-99-1 HCAPLUS  
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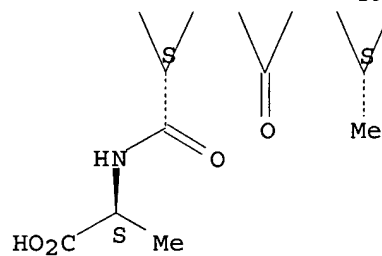
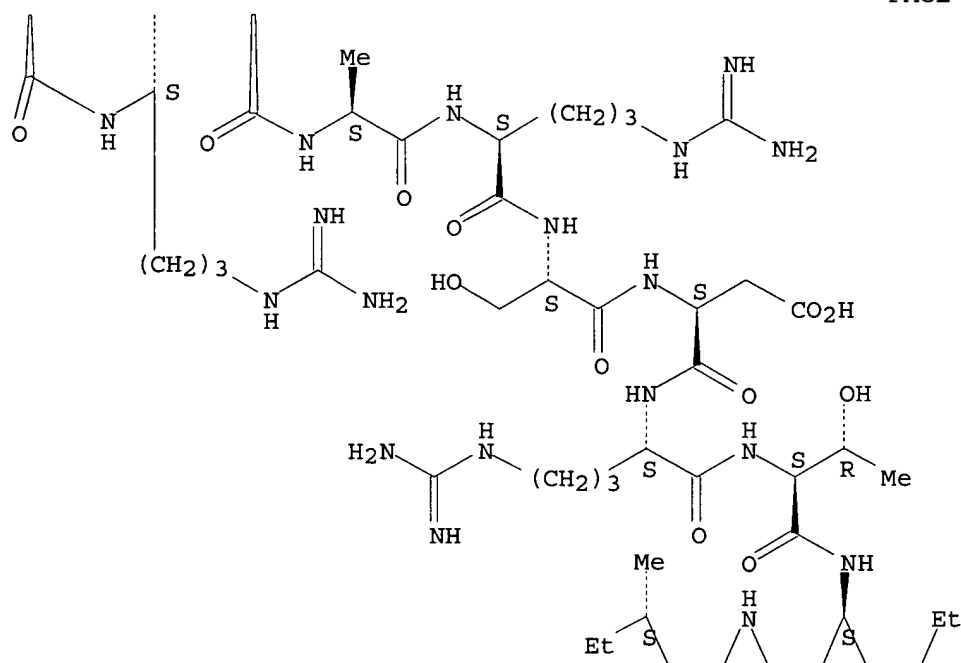
Absolute stereochemistry.

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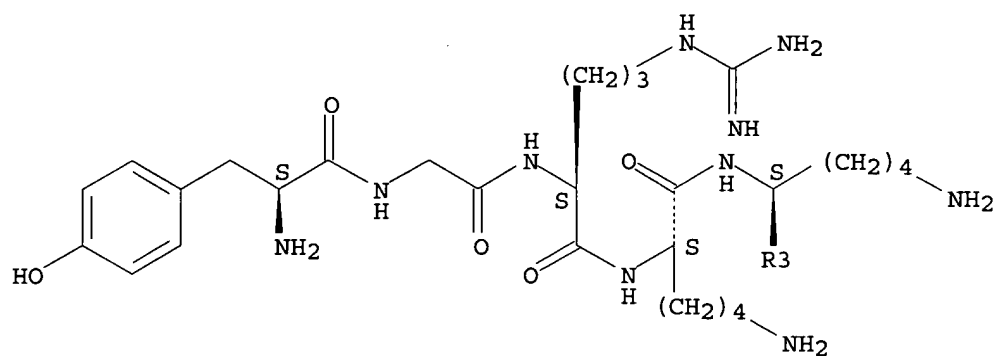


RN 785805-00-7 HCAPLUS

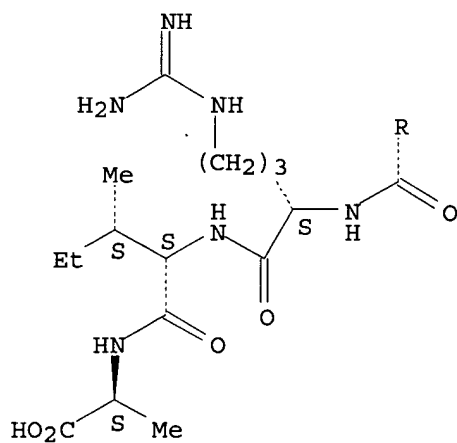
CN L-Alanine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutamyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arganyl-L-seryl-L-α-aspartyl-L-arginyl-L-lysyl-L-arginyl-L-isoleucyl- (9CI) (CA INDEX NAME)

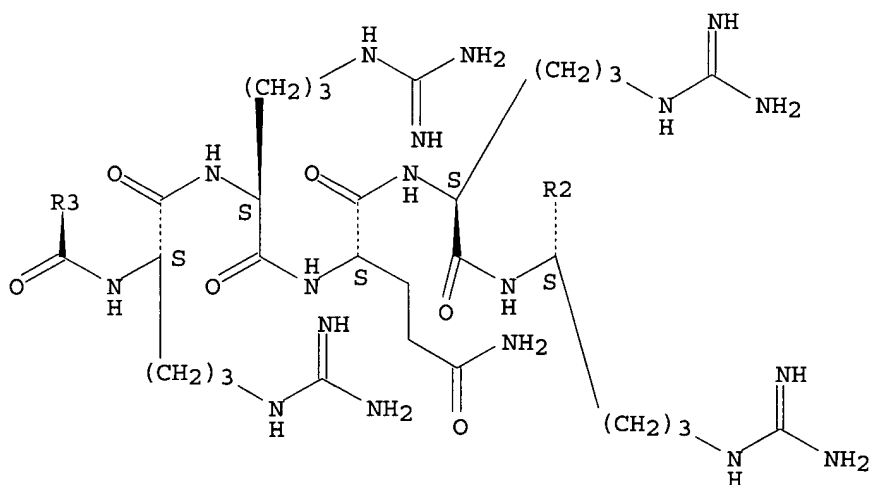
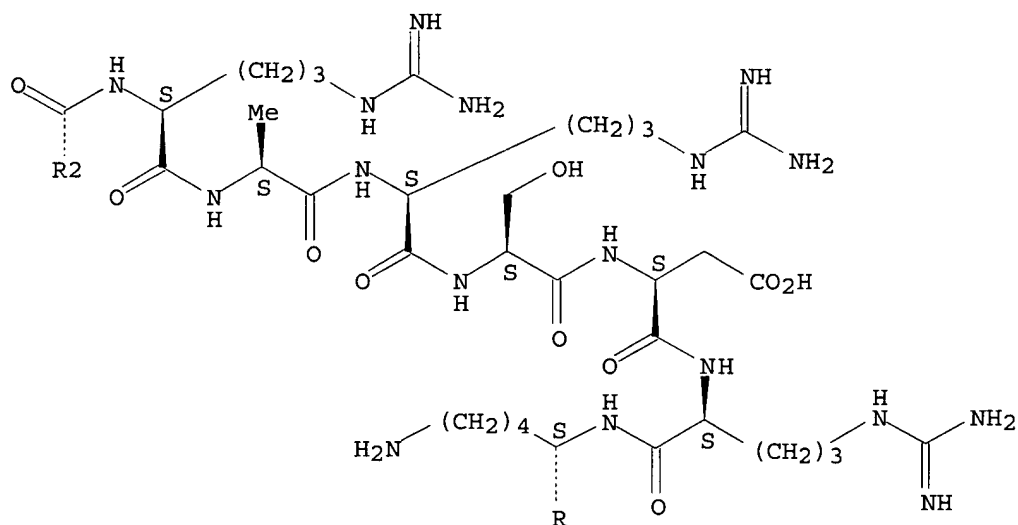
Absolute stereochemistry.

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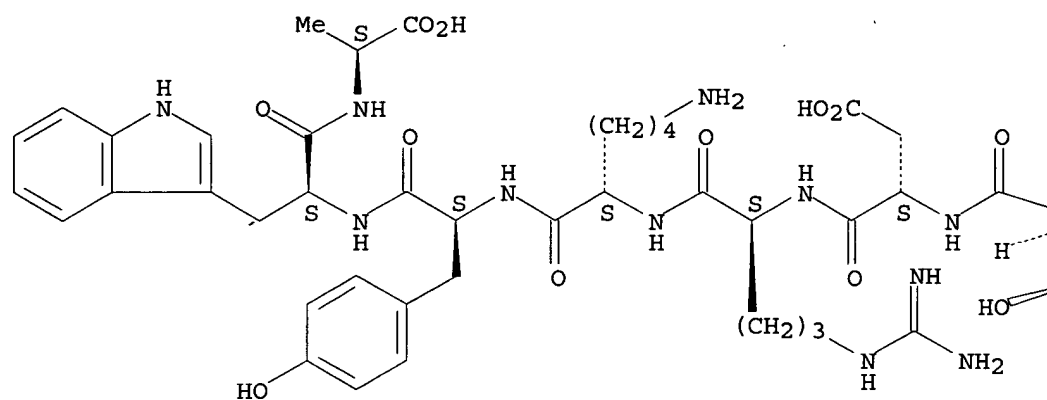


RN 785805-01-8 HCAPLUS

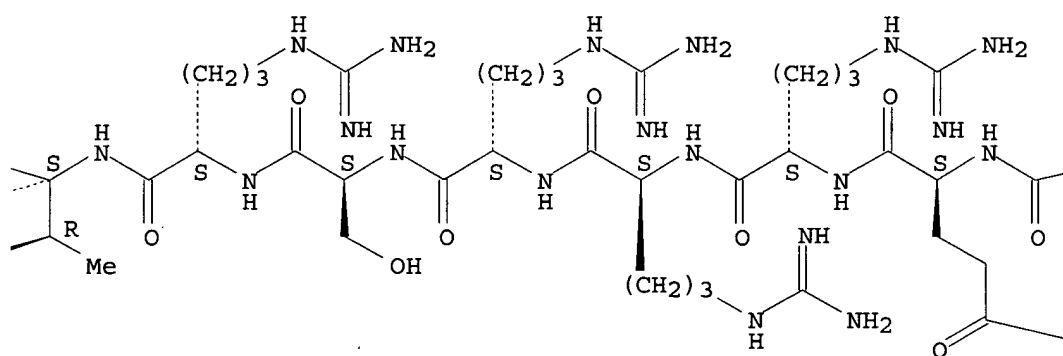
CN L-Alanine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-seryl-L-arginyl-L-threonyl-L- $\alpha$ -aspartyl-L-arginyl-L-lysyl-L-tyrosyl-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

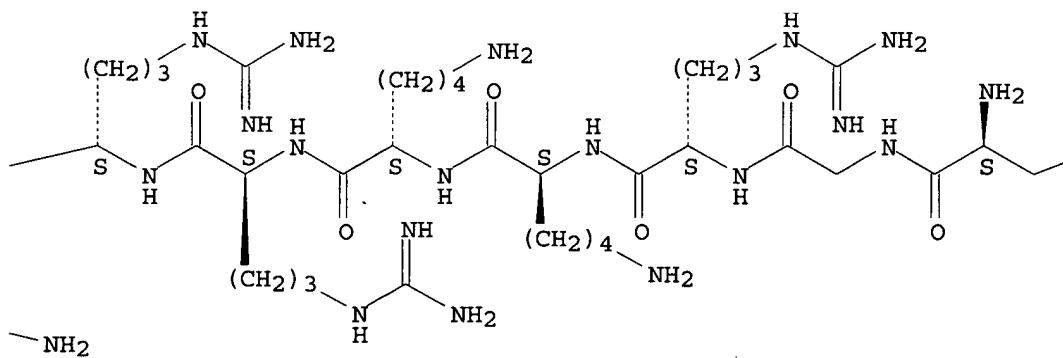
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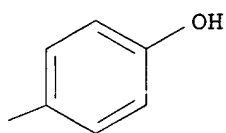


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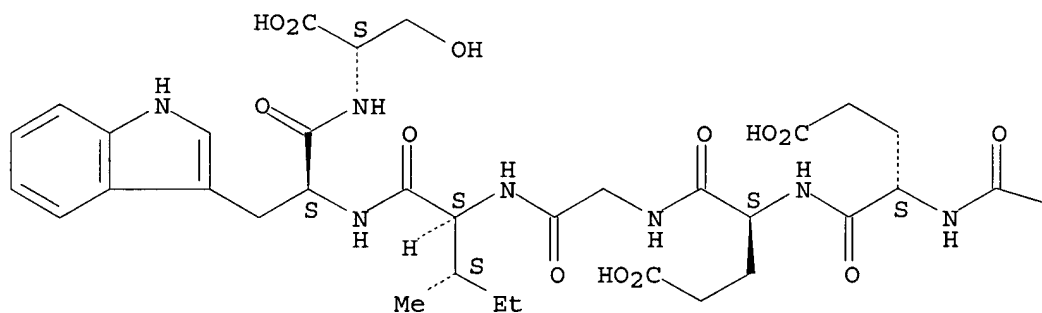


RN 785805-02-9 HCAPLUS

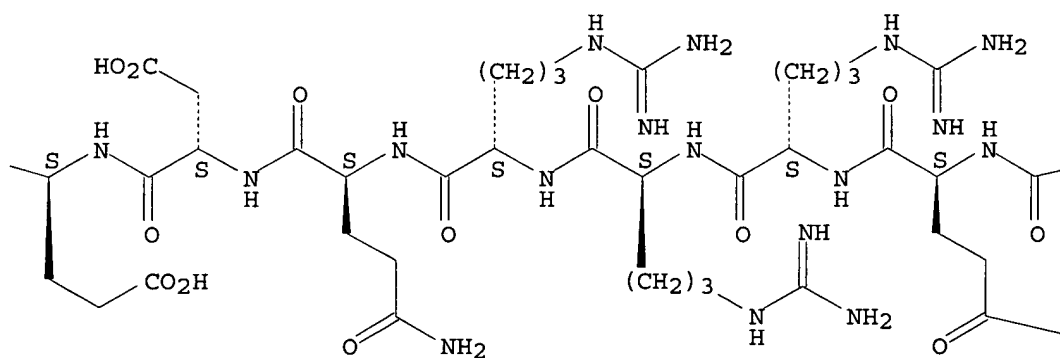
CN L-Serine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-glutaminyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L- $\alpha$ -glutamyl-L- $\alpha$ -glutamylglycyl-L-isoleucyl-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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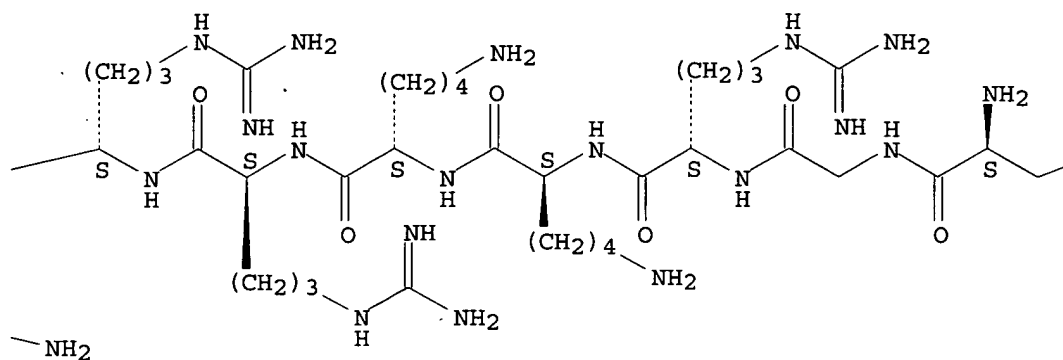


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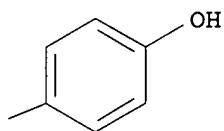




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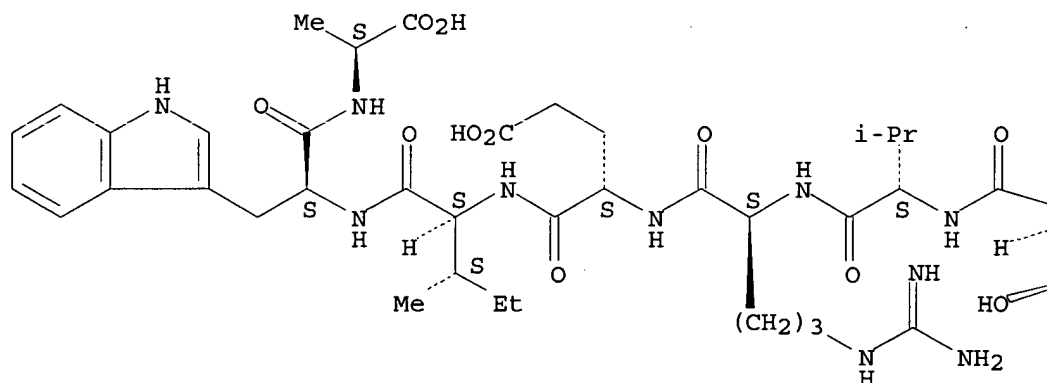


RN 785805-03-0 HCAPLUS

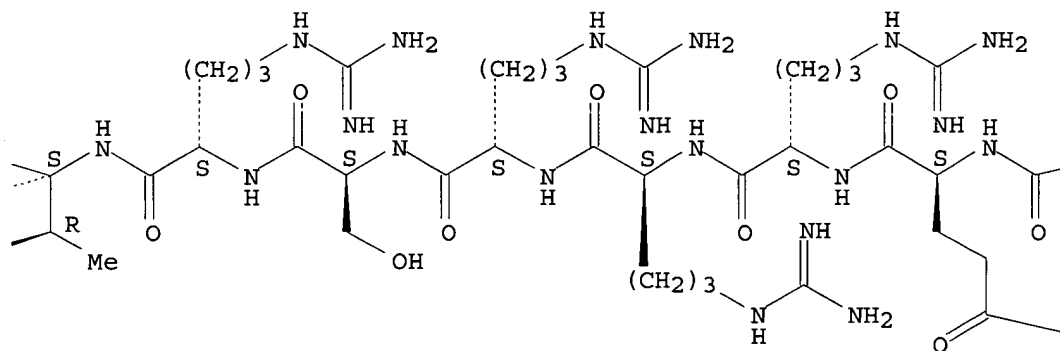
CN L-Alanine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutamyl-L-arginyl-L-arginyl-L-arginyl-L-seryl-L-arginyl-L-threonyl-L-valyl-L-arginyl-L- $\alpha$ -glutamyl-L-isoleucyl-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

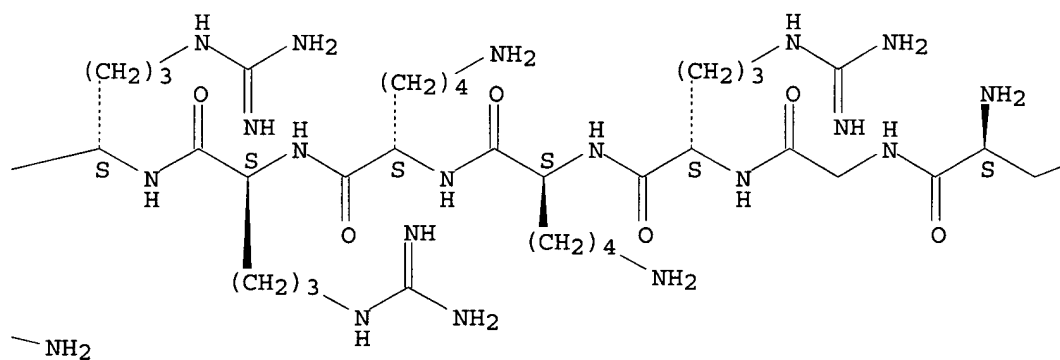
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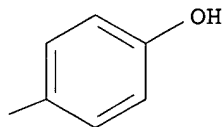
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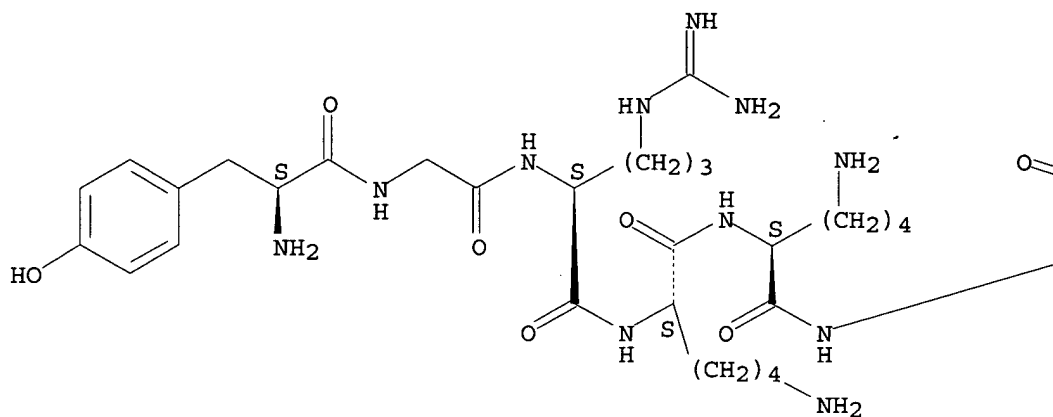


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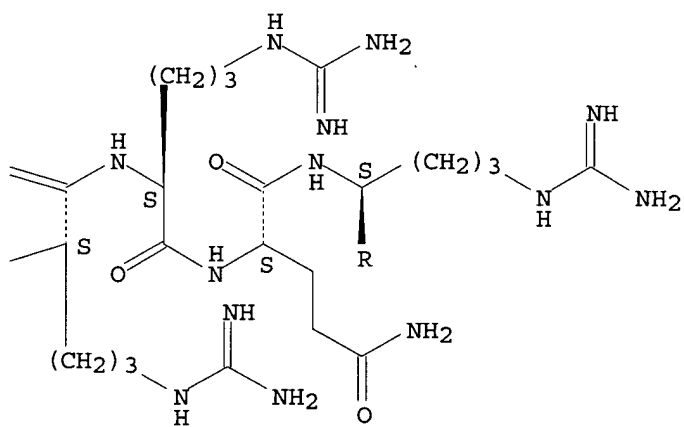
CN L-Leucine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-seryl-L-valyl-L-threonyl-L-seryl-L-threonyl-L-seryl-L-isoleucyl-L-asparaginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

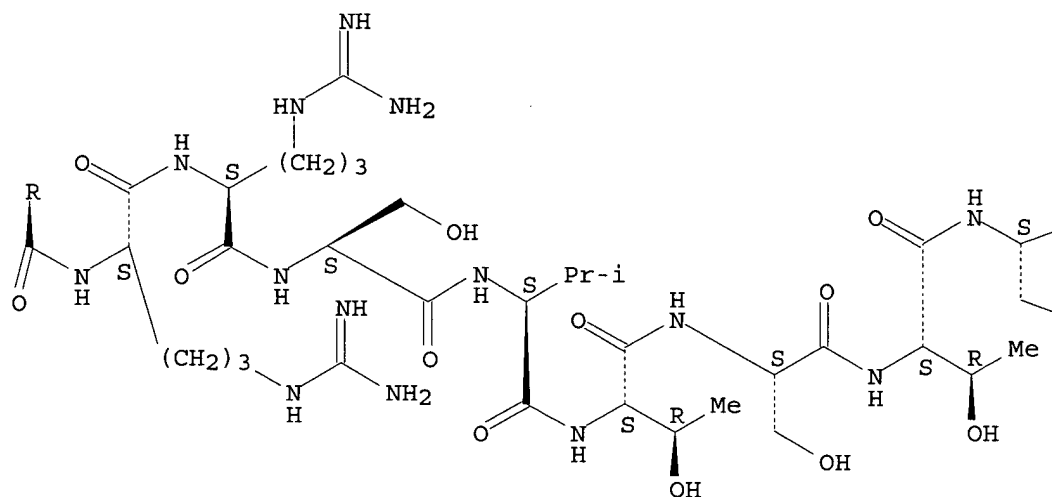
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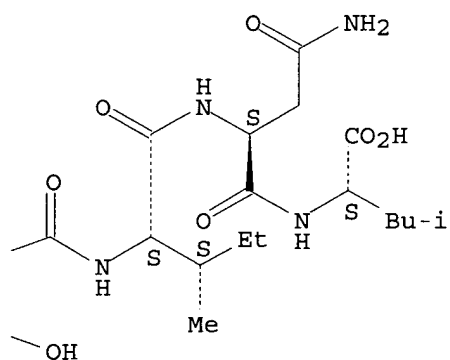
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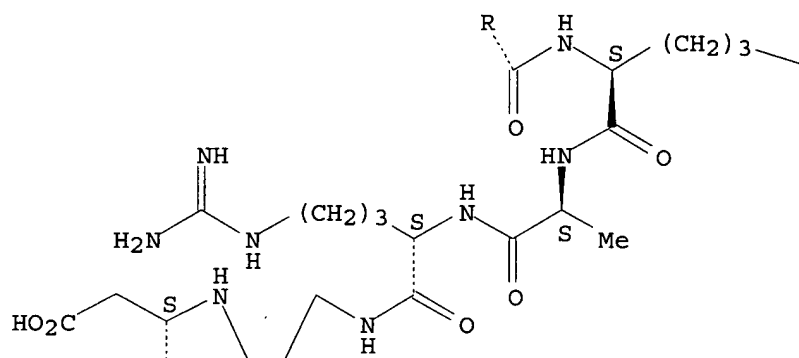
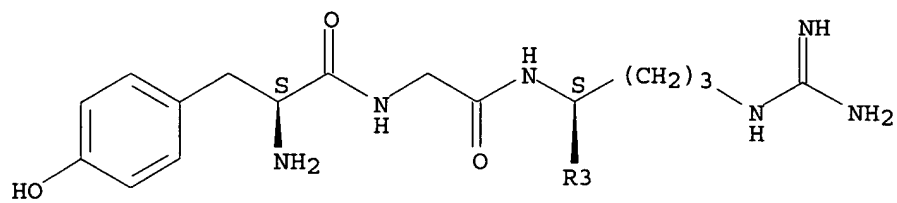


RN 785805-05-2 HCAPLUS

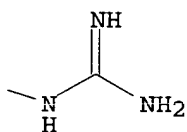
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Absolute stereochemistry.

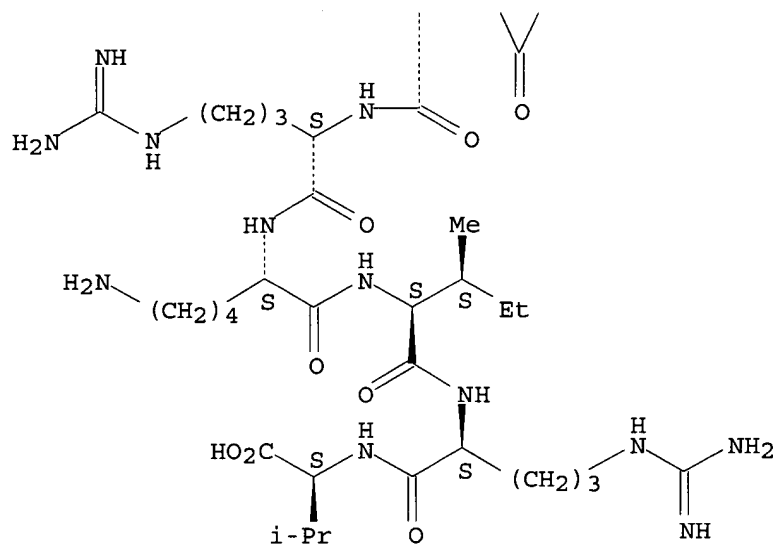
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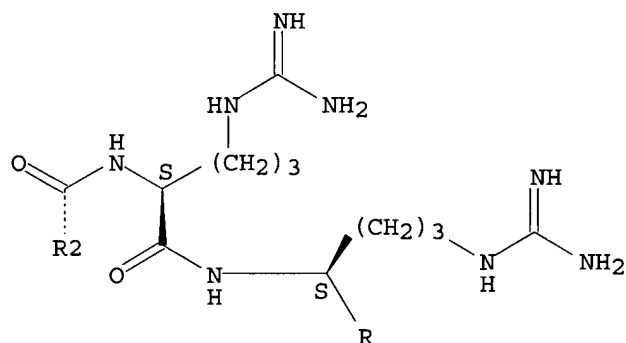
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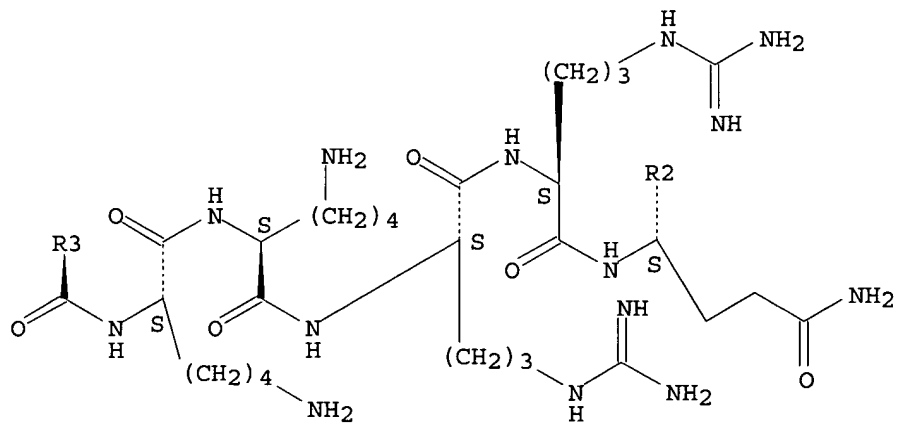
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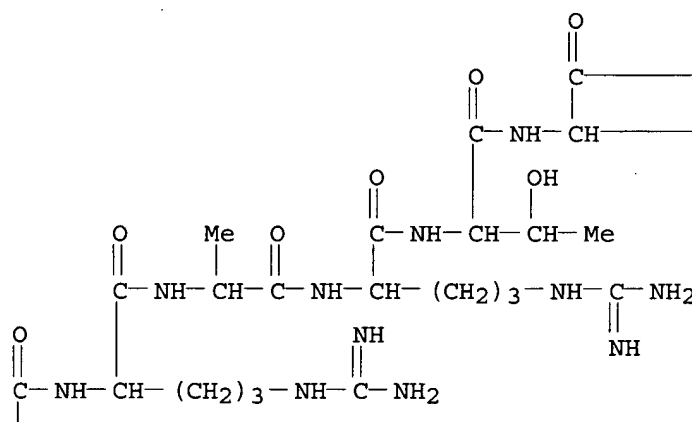


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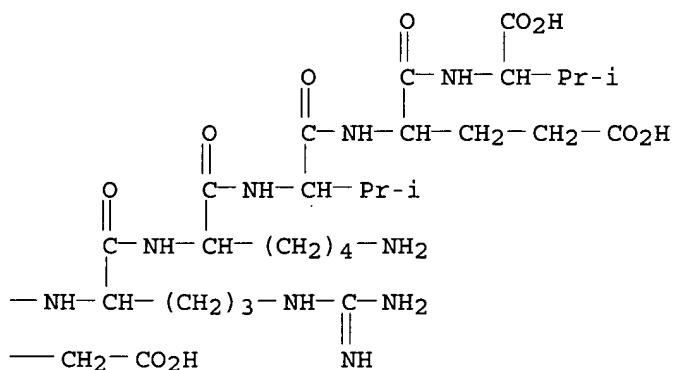


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RN      785805-06-3   HCAPLUS
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        glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arginyl-L-threonyl-L-
        α-aspartyl-L-arginyl-L-lysyl-L-valyl-L-α-glutamyl- (9CI)  (CA
INDEX NAME)
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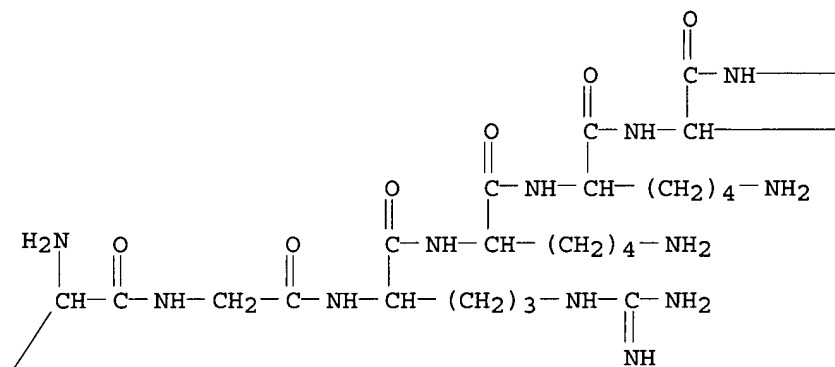
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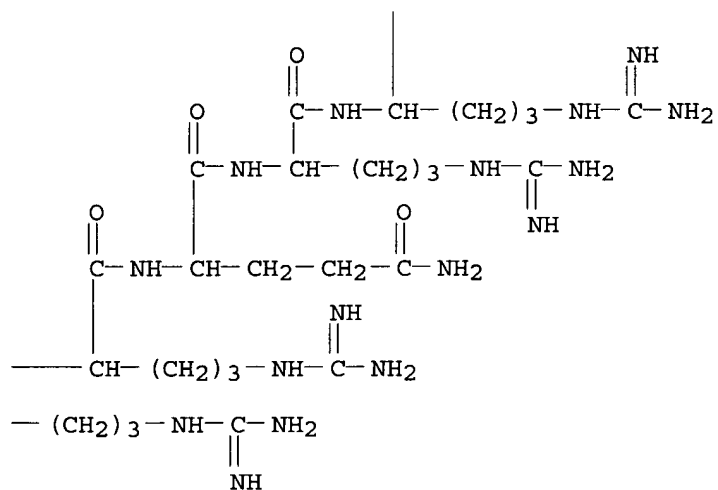
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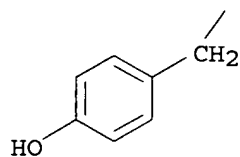
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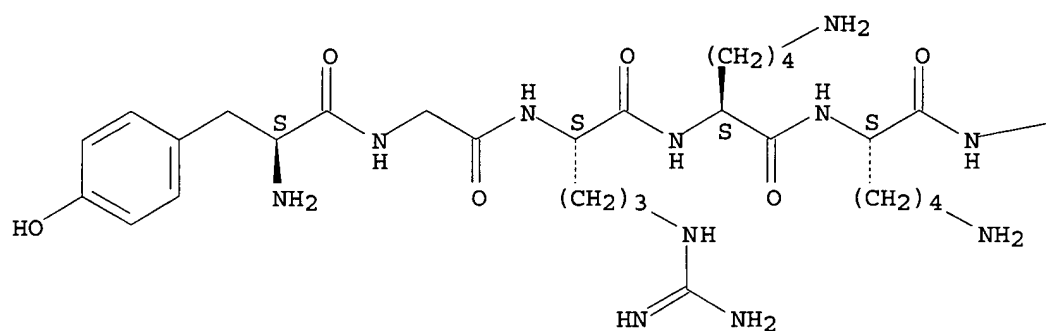




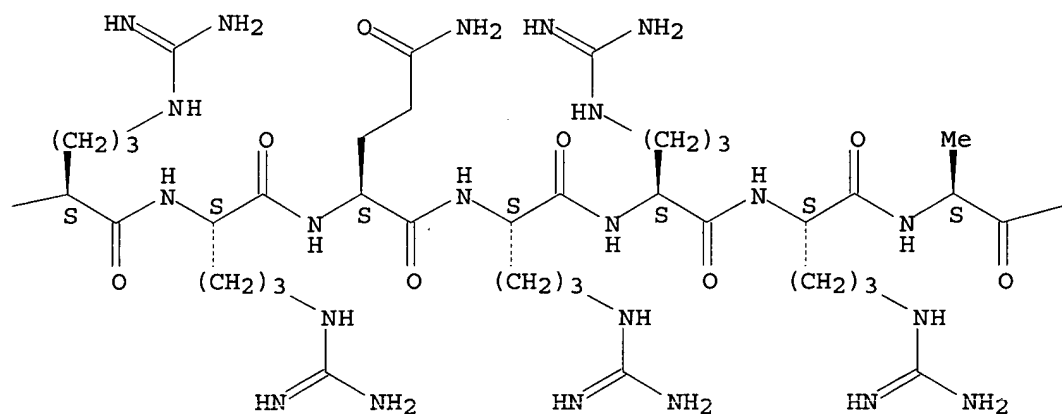
RN 785805-07-4 HCAPLUS  
 CN L-Valine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutamyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arginylglycyl-L- $\alpha$ -aspartyl-L-arginyl-L-lysyl-L-tyrosyl-L-isoleucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

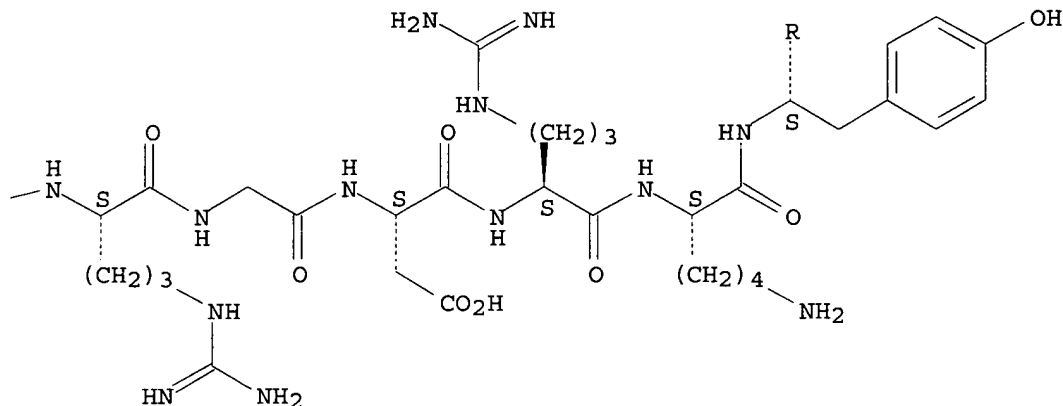
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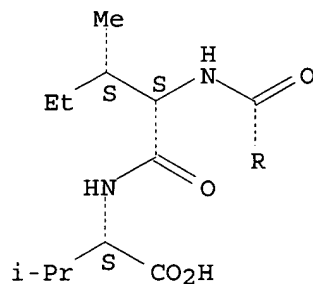
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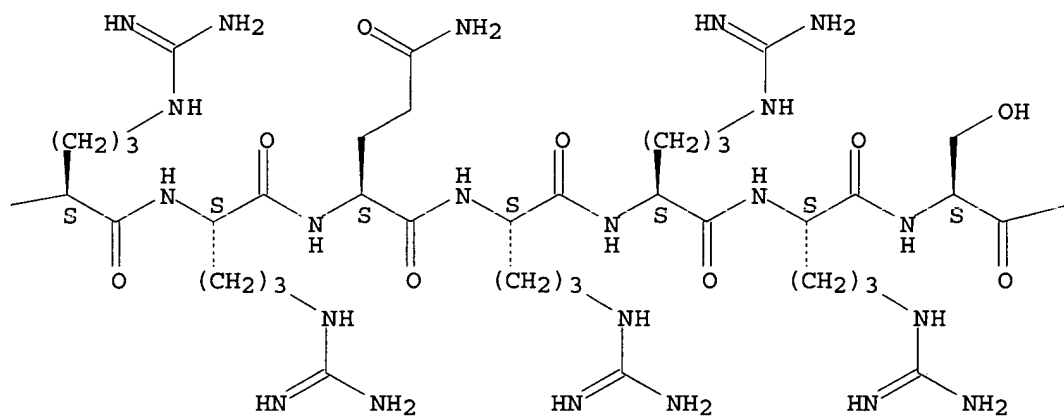
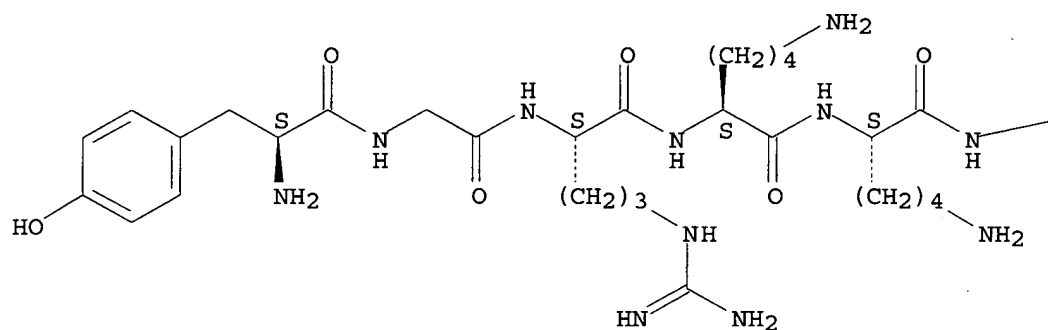
PAGE 2-A



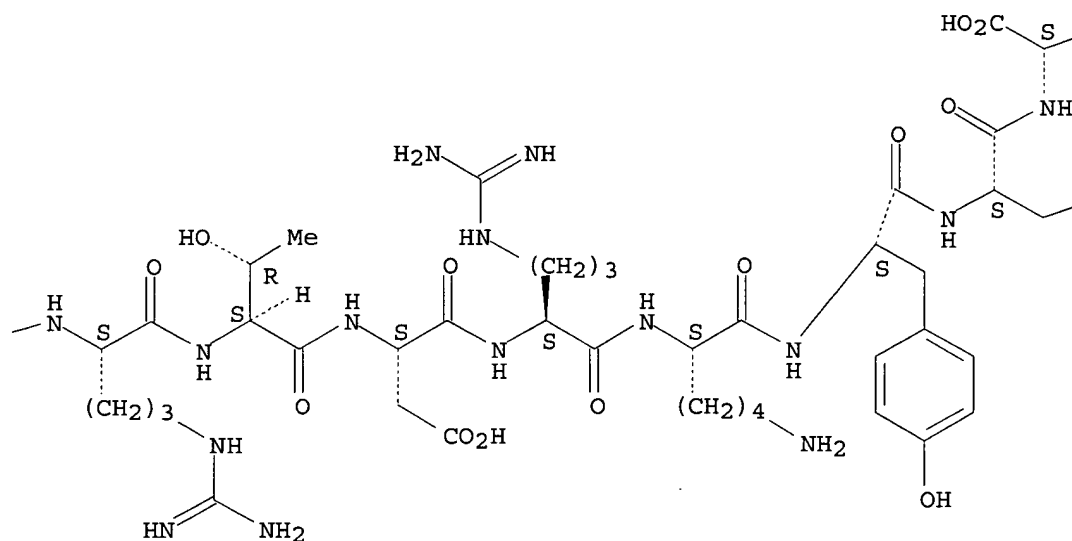
RN 785805-08-5 HCAPLUS

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(9CI) (CA INDEX NAME)

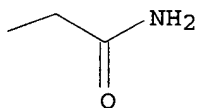
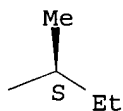
Absolute stereochemistry.



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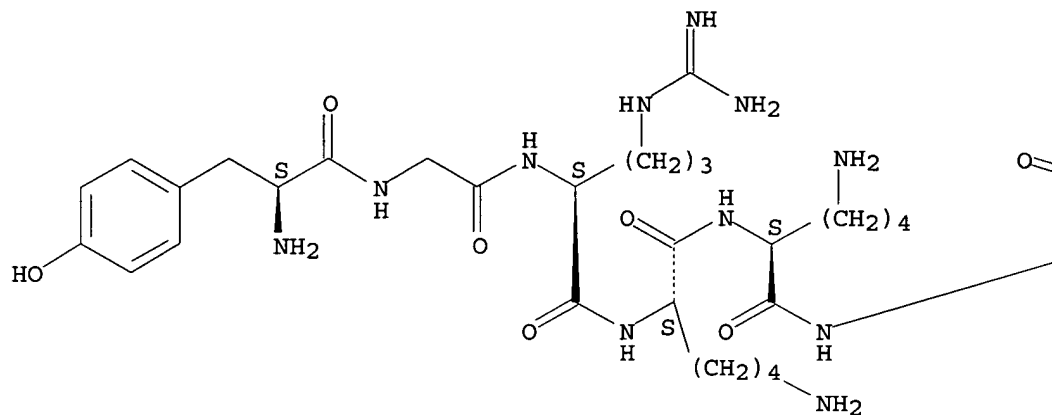


RN 785805-10-9 HCAPLUS

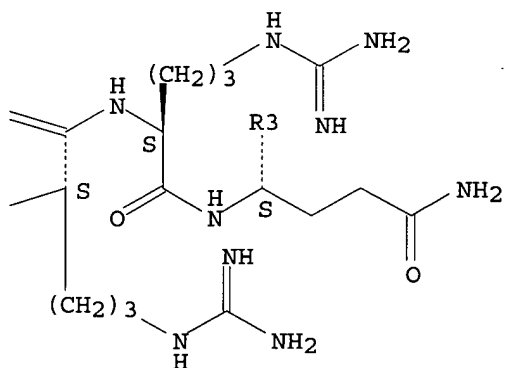
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Absolute stereochemistry.

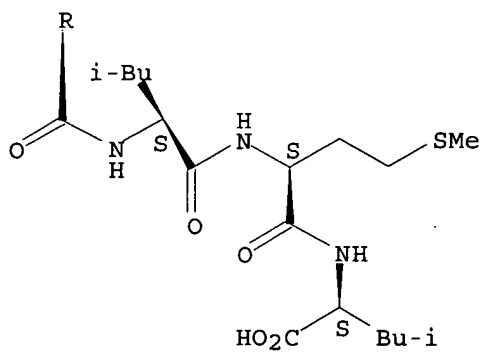
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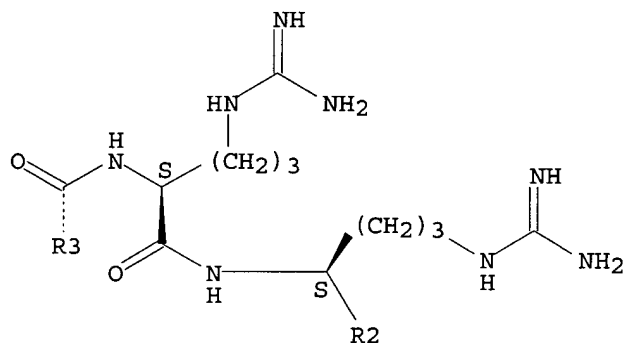
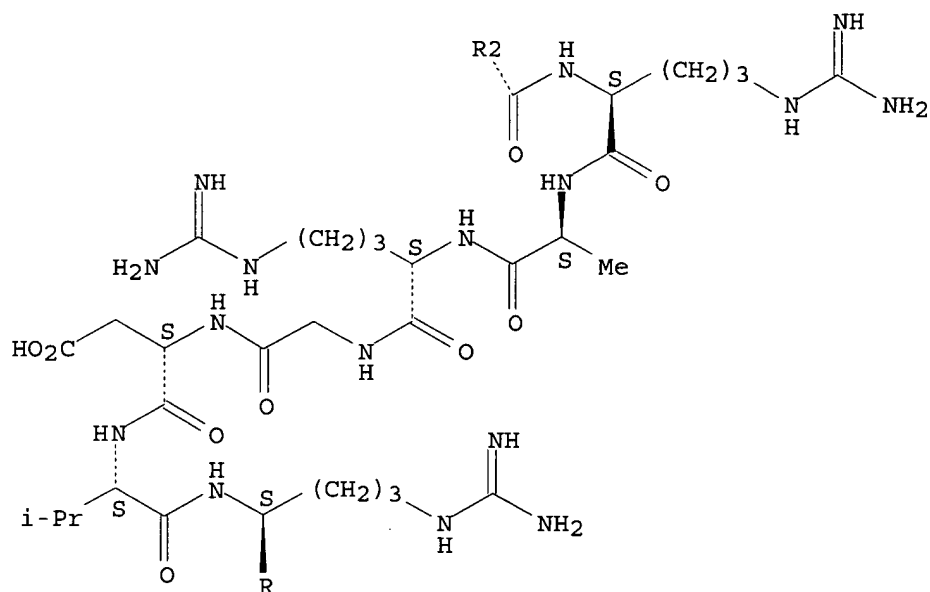


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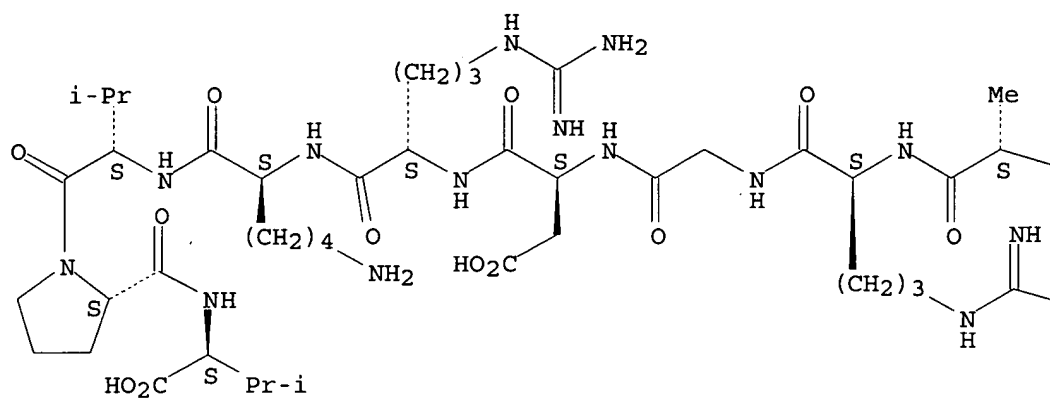


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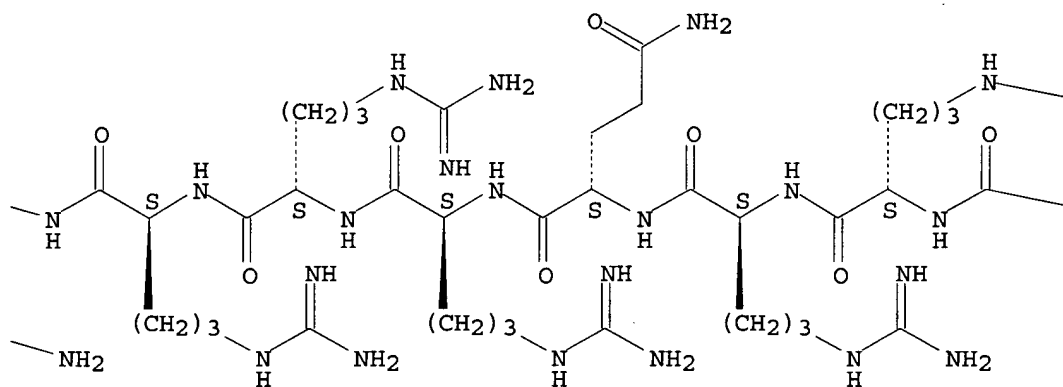
CN L-Valine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutamyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arginylglycyl-L-α-aspartyl-L-arginyl-L-lysyl-L-valyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

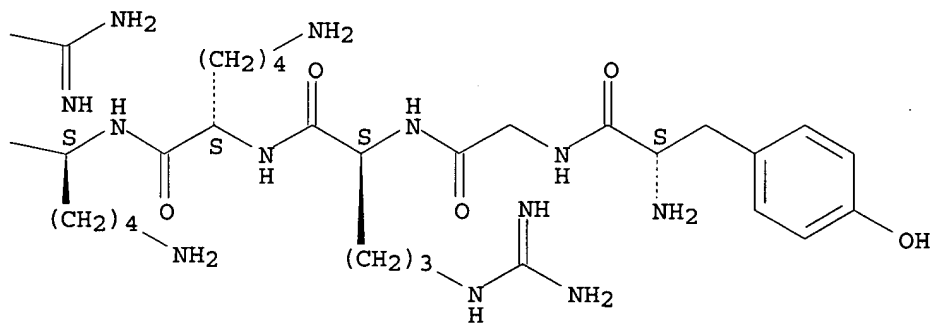
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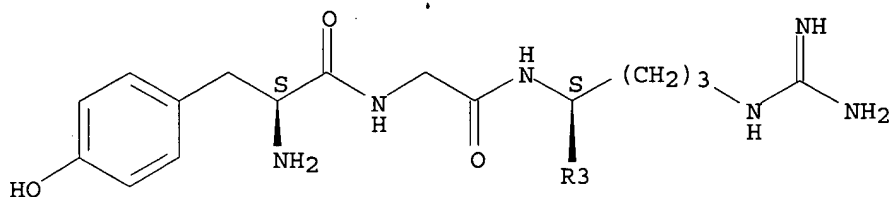


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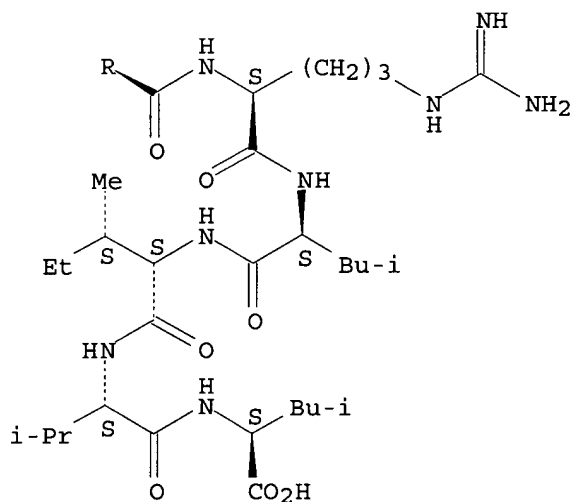
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(CA INDEX NAME)

Absolute stereochemistry.

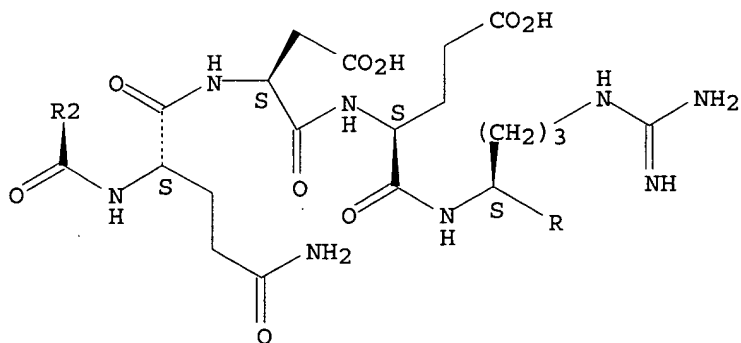
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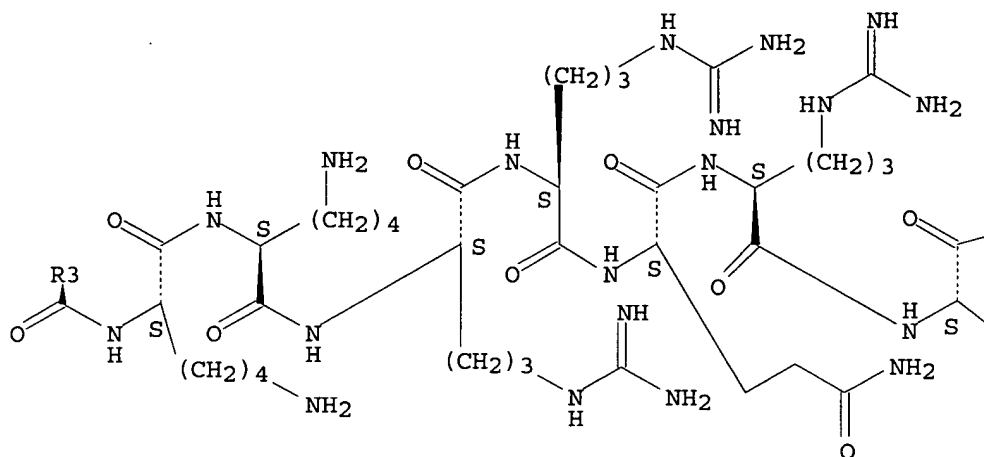


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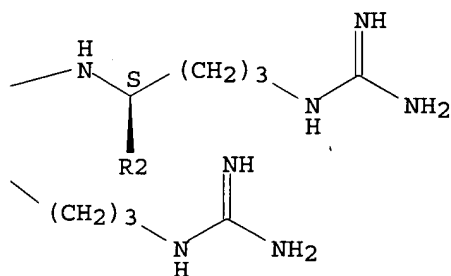




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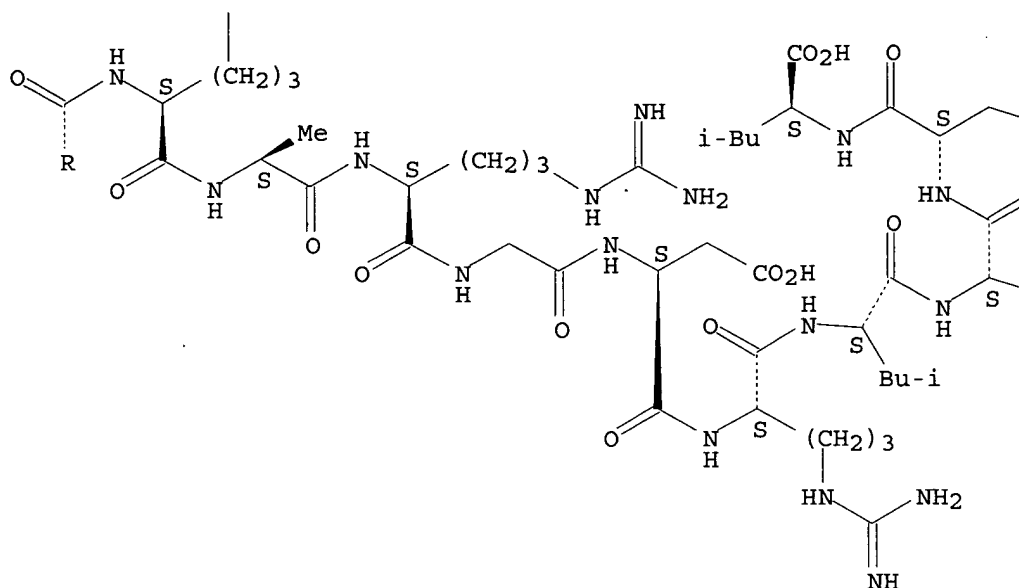


RN 785805-13-2 HCAPLUS

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Absolute stereochemistry.





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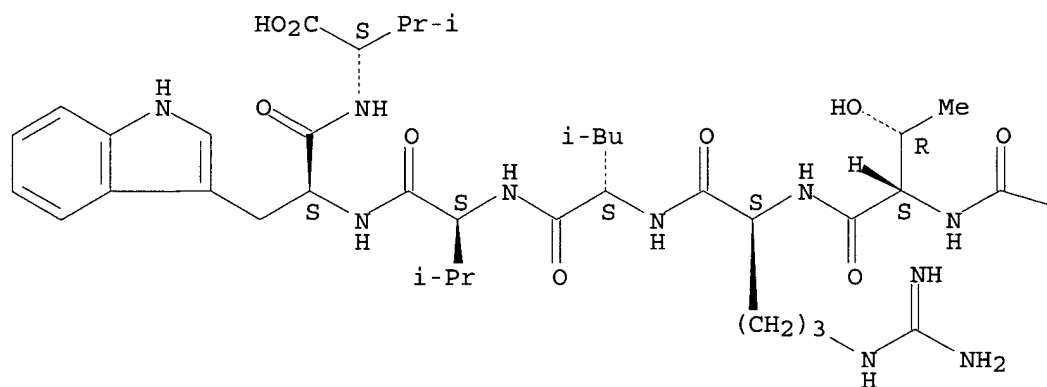
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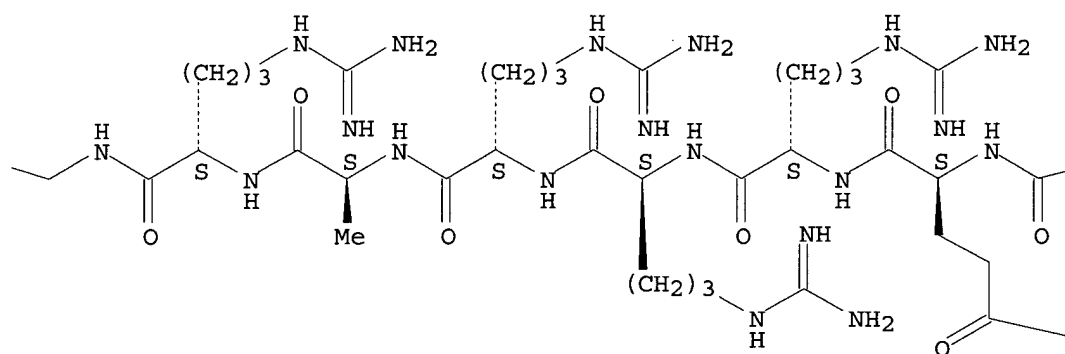
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Absolute stereochemistry.

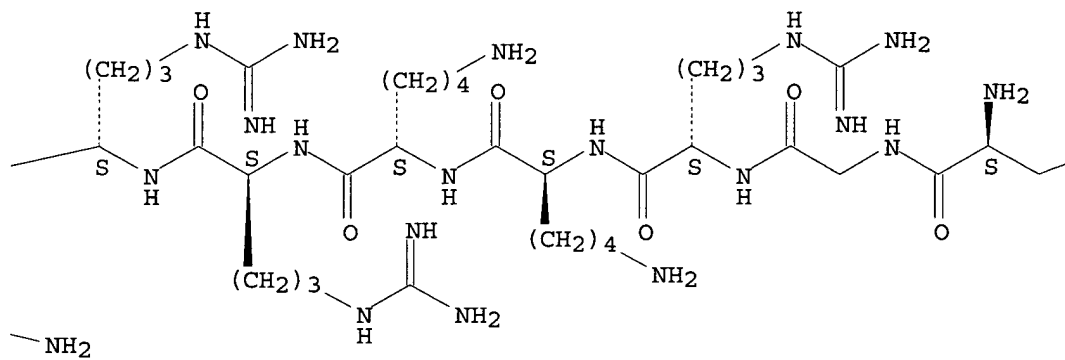
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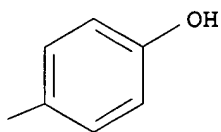


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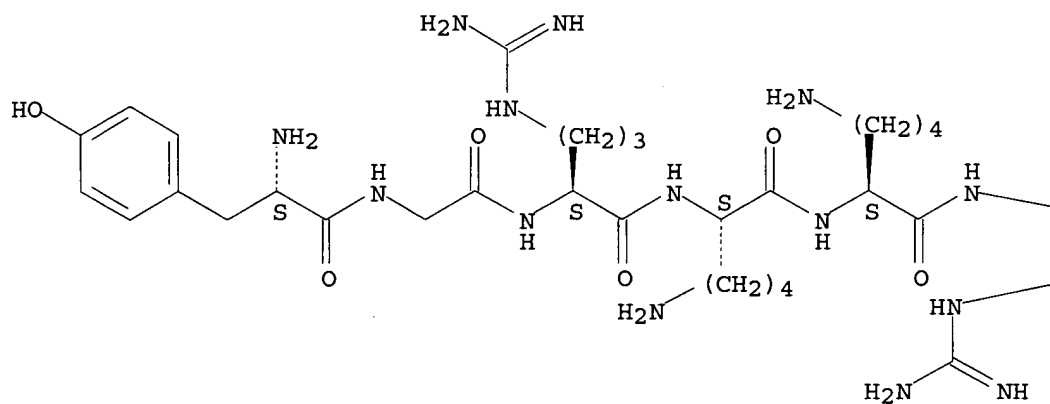


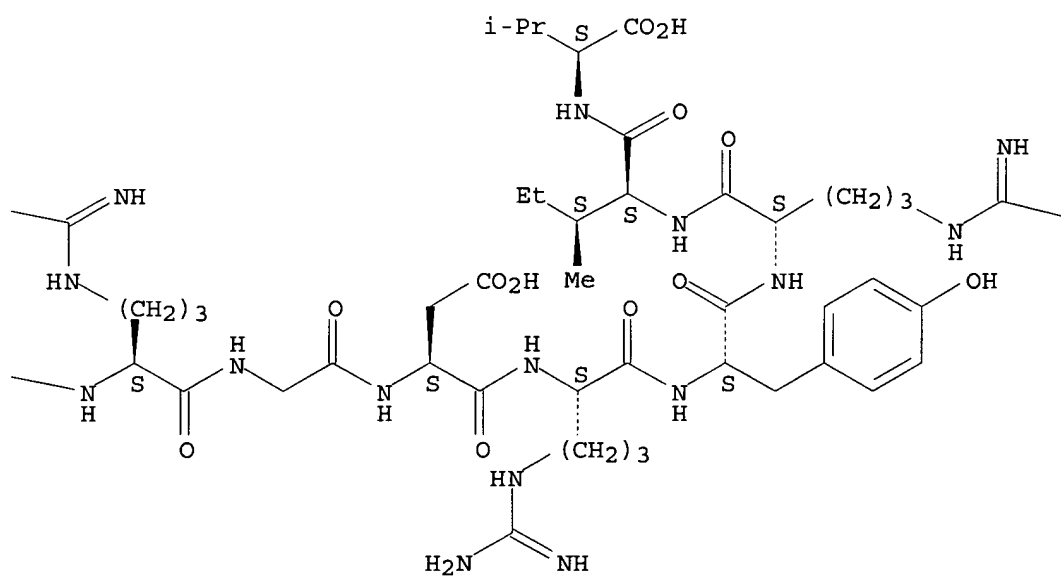
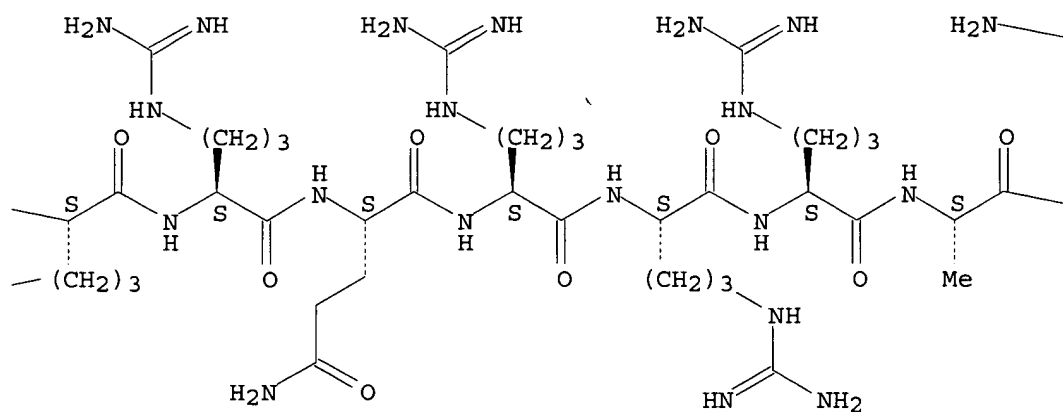


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Absolute stereochemistry.





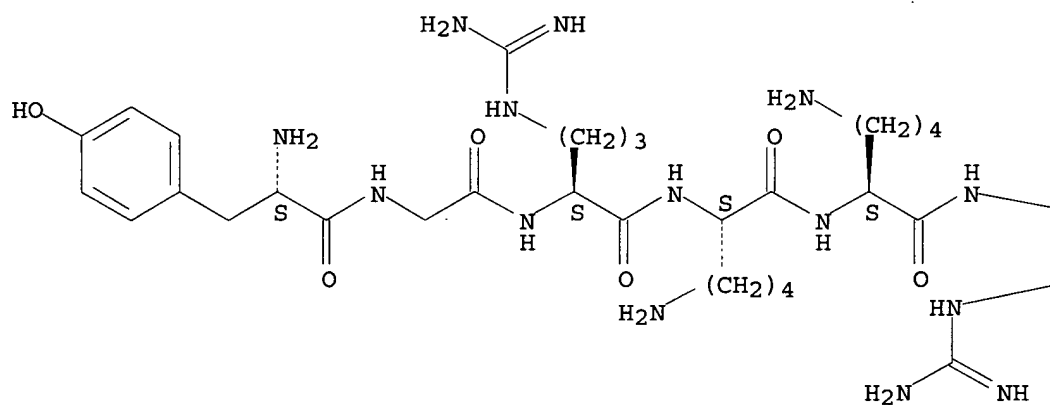
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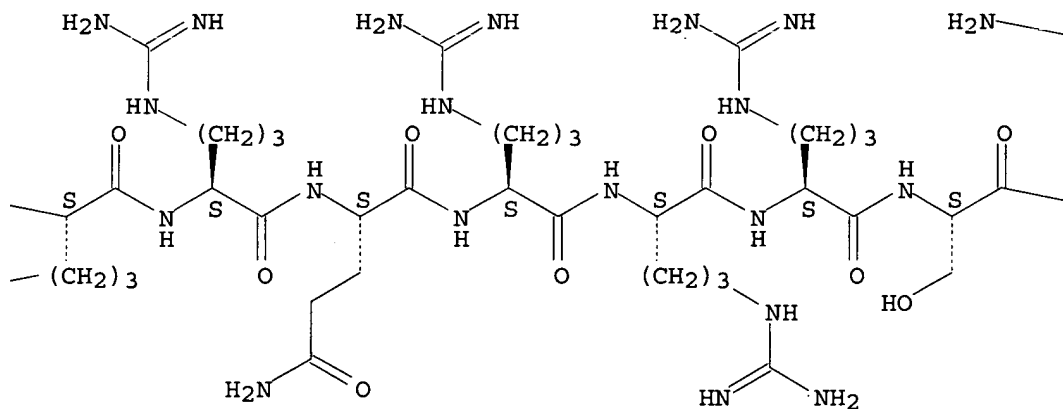
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(CA INDEX NAME)

Absolute stereochemistry.

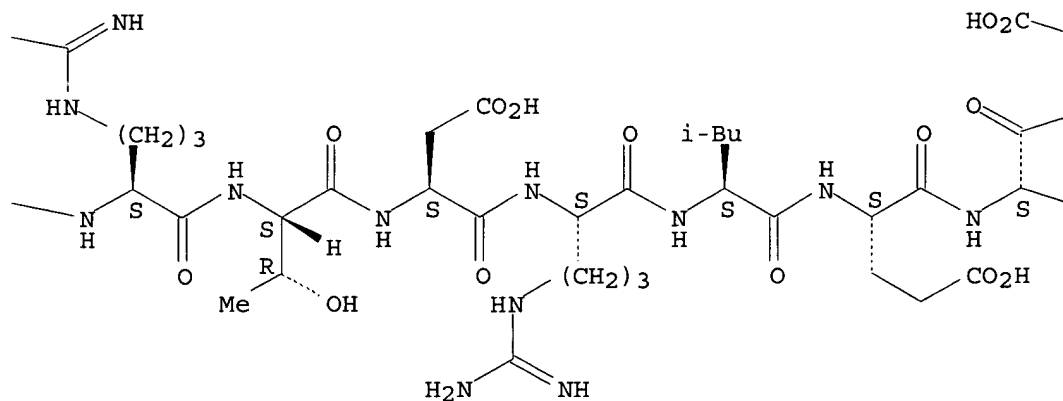
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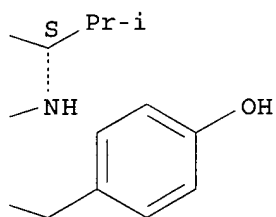
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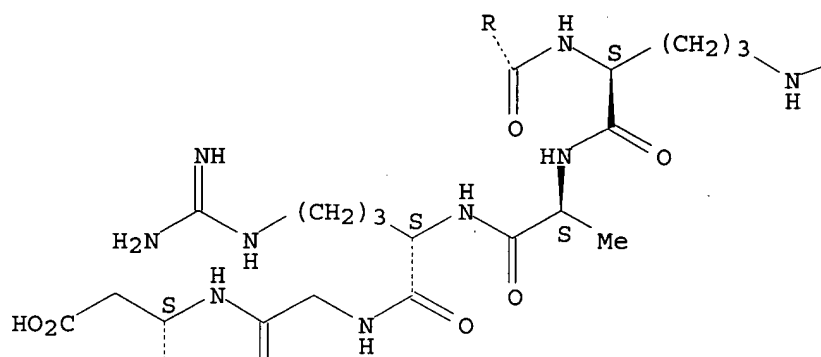
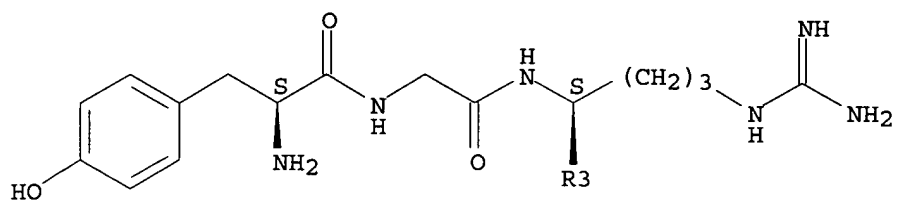
RN 785805-17-6 HCAPLUS

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(CA INDEX NAME)

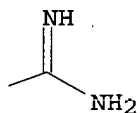
Absolute stereochemistry.



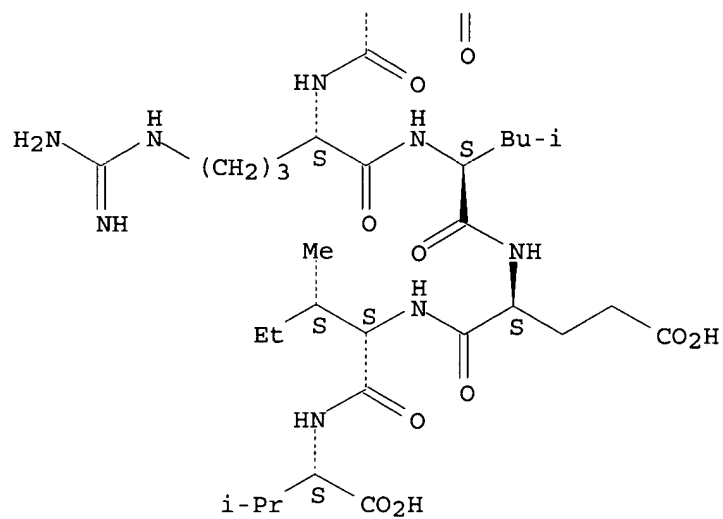
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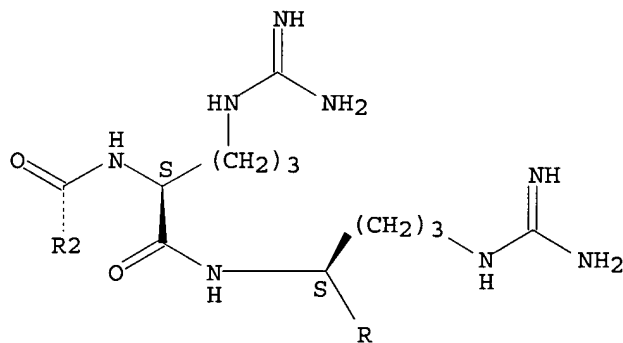
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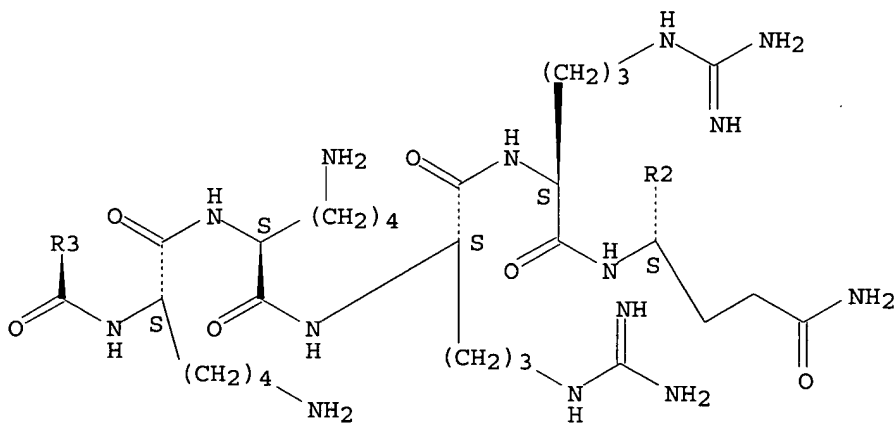
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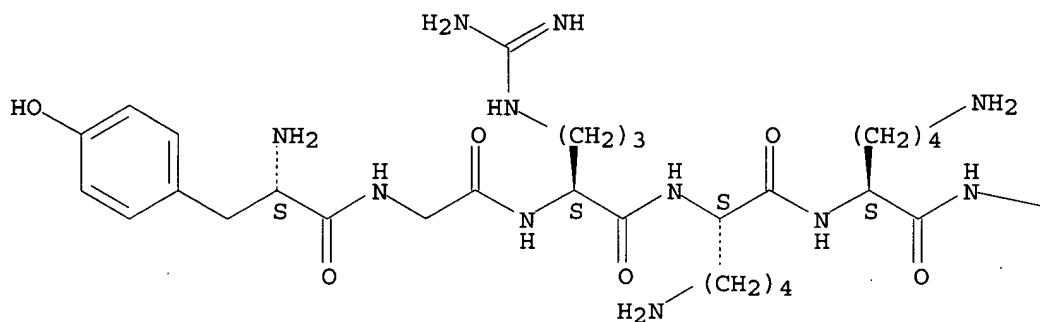


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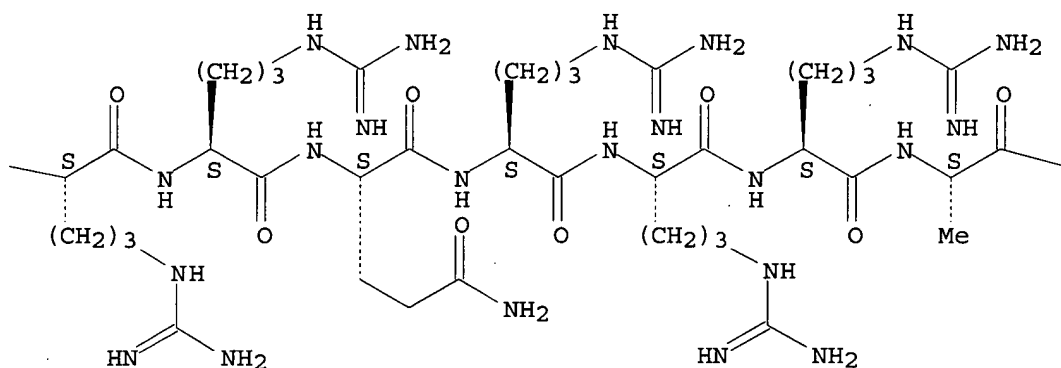
CN L-Tyrosine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginyl-L-alanyl-L-arginylglycyl-L- $\alpha$ -aspartyl-L-arginyl-L-threonyl-L-isoleucyl-L-isoleucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

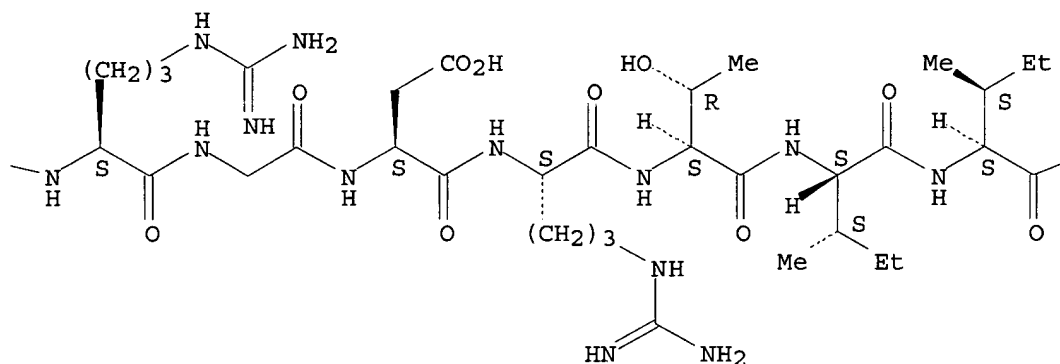
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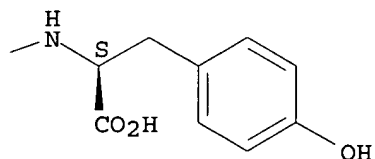
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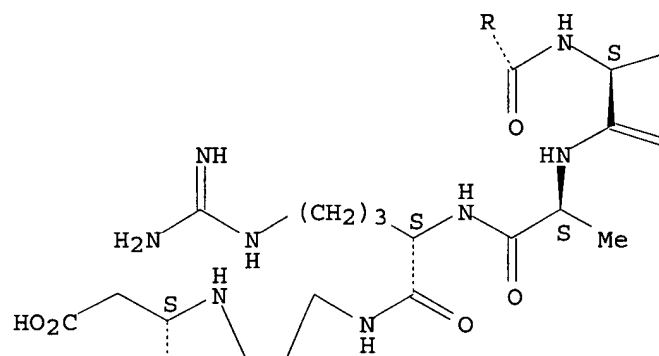
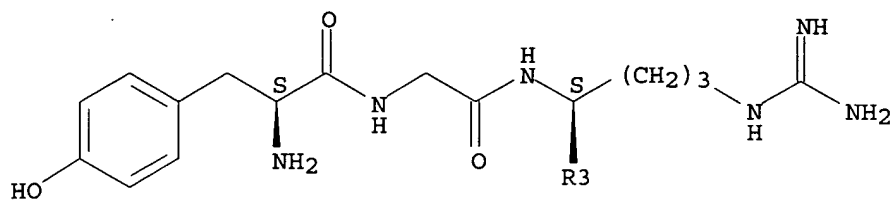


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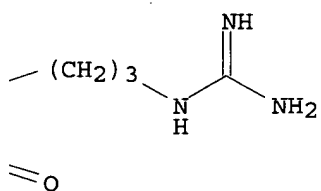
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Absolute stereochemistry.

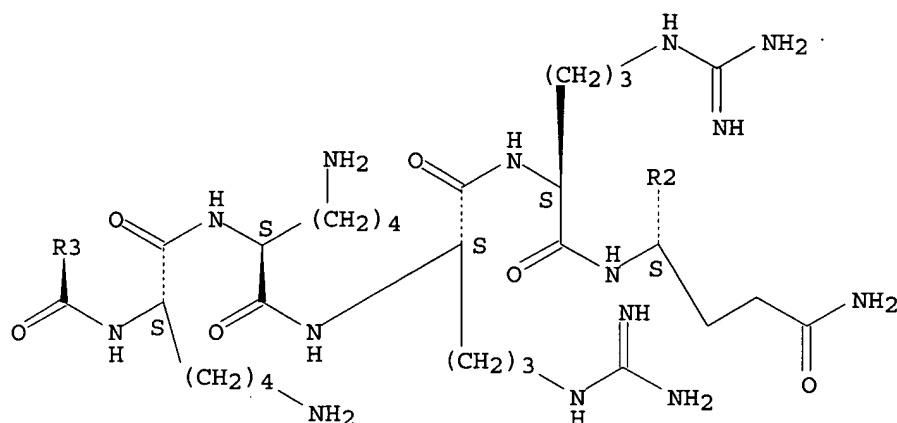
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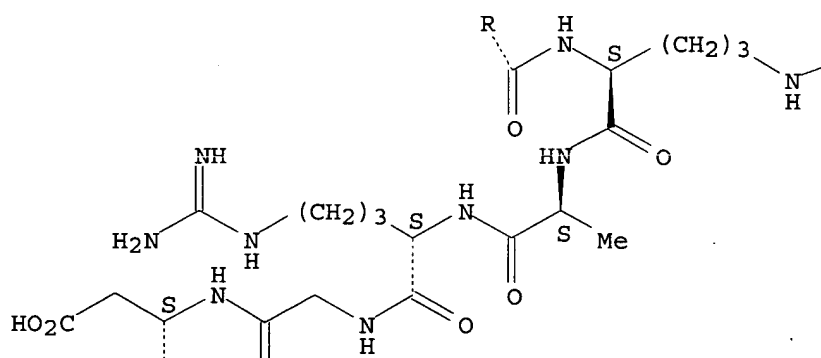
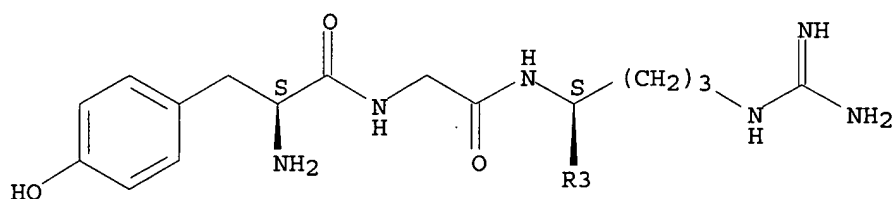


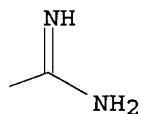


RN 785805-20-1 HCAPLUS

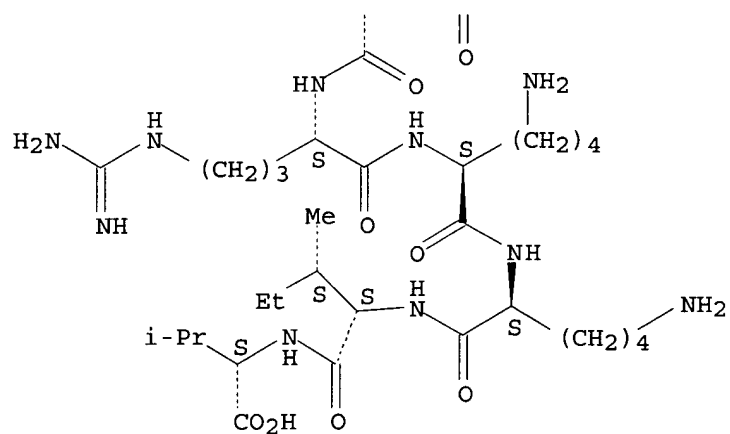
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Absolute stereochemistry.

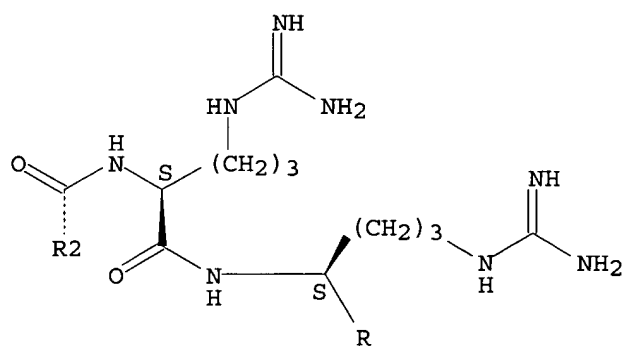




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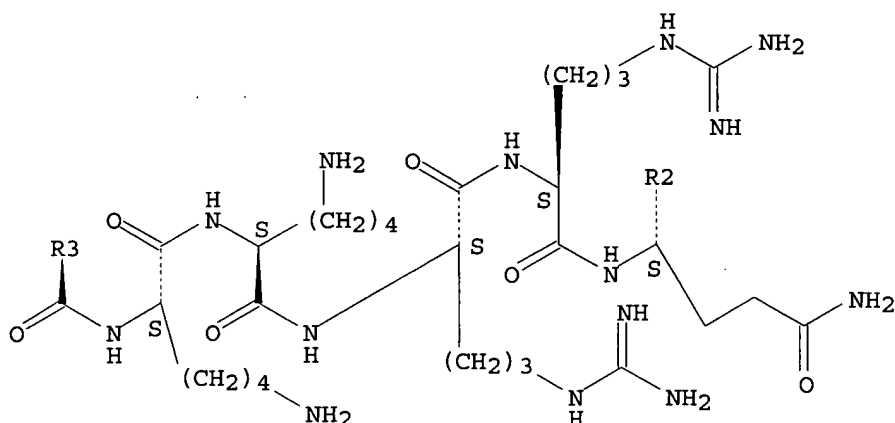


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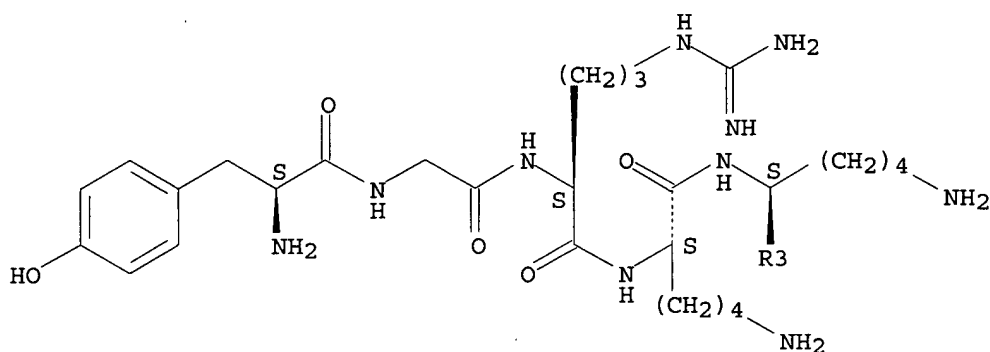
PAGE 4-A



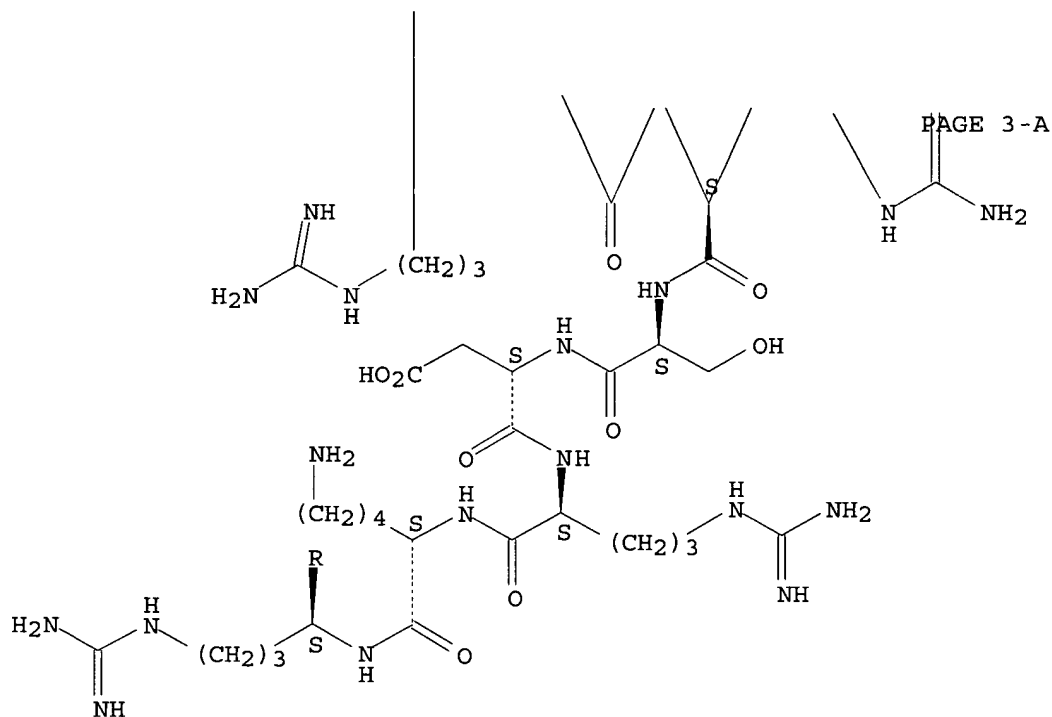
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Absolute stereochemistry.

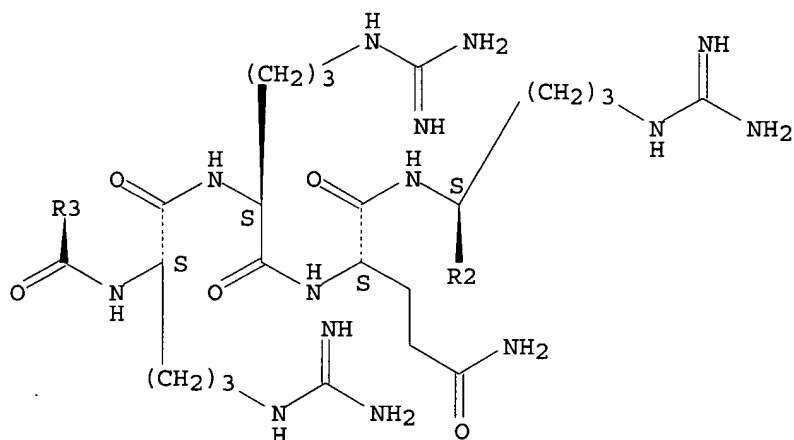
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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*



PAGE 4-A

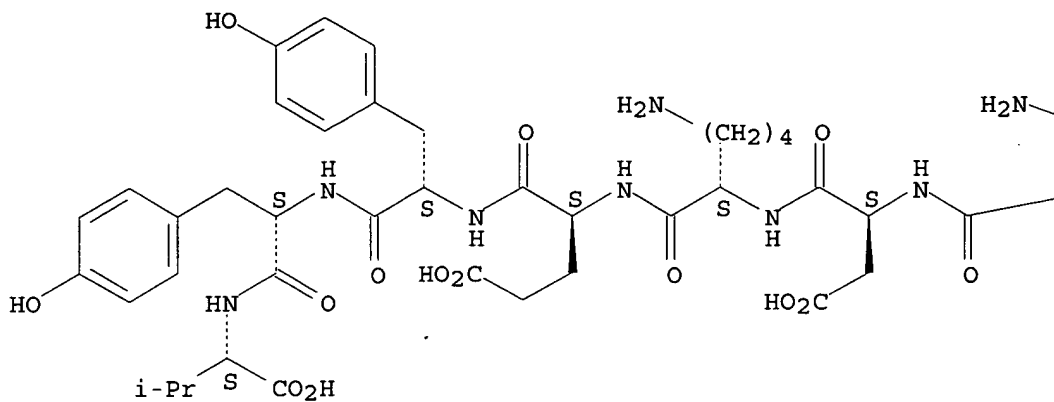


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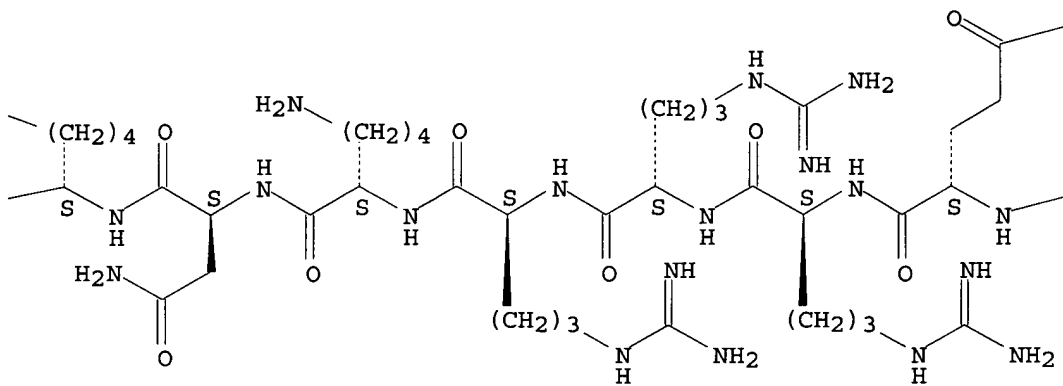
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(CA INDEX NAME)

Absolute stereochemistry.

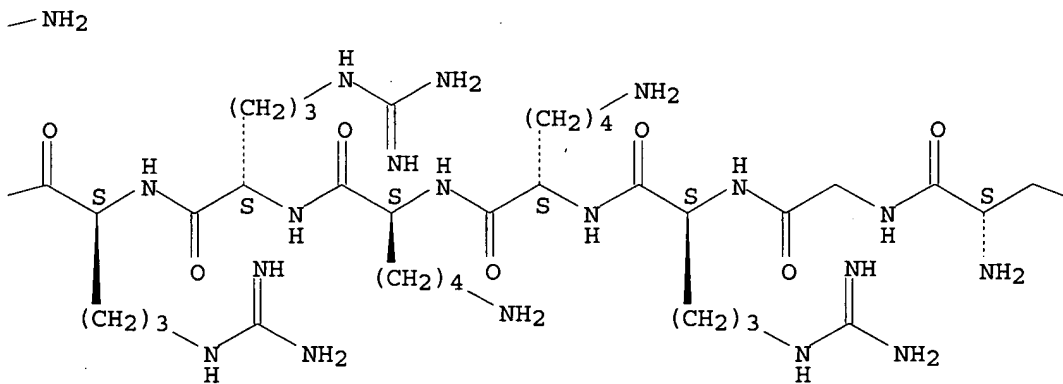
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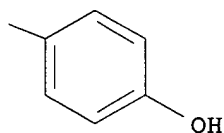


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PAGE 1-C

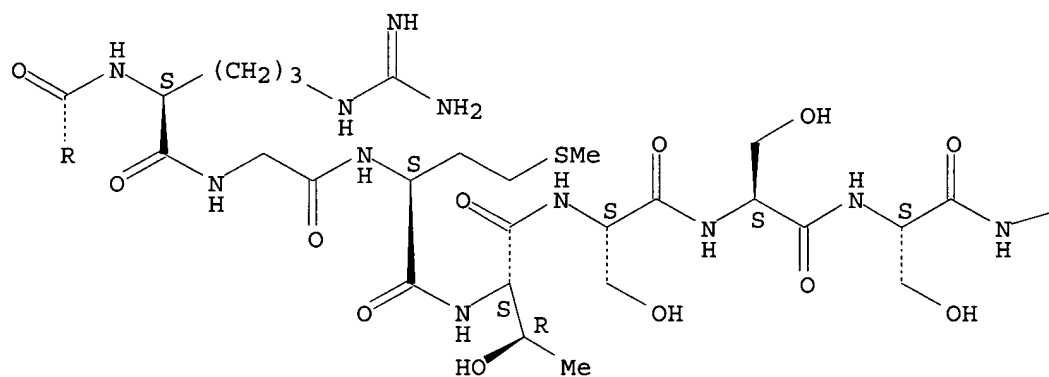
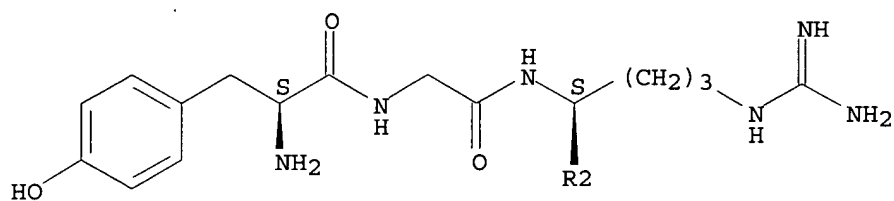


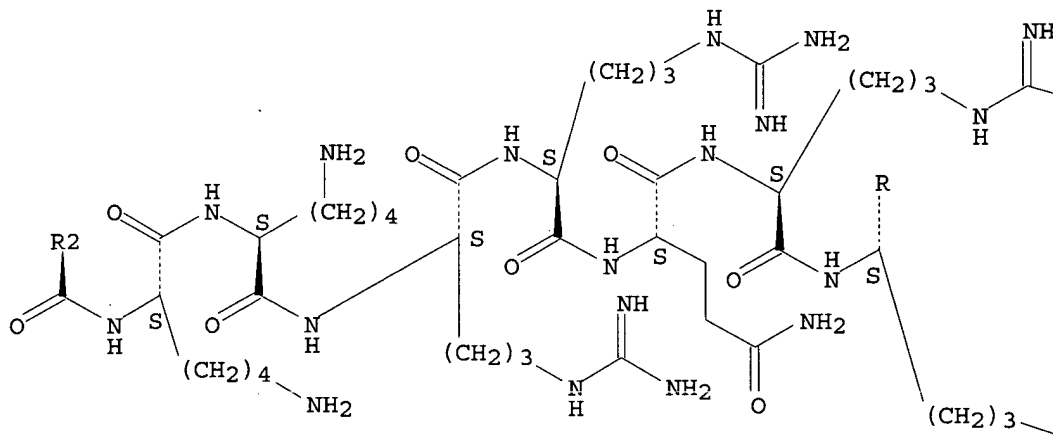
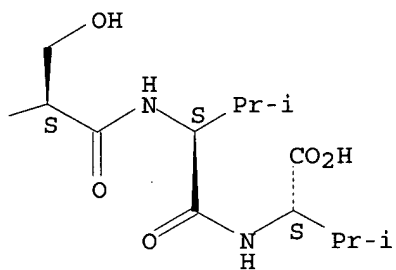


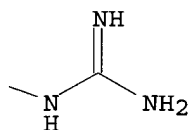
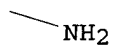
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Absolute stereochemistry.





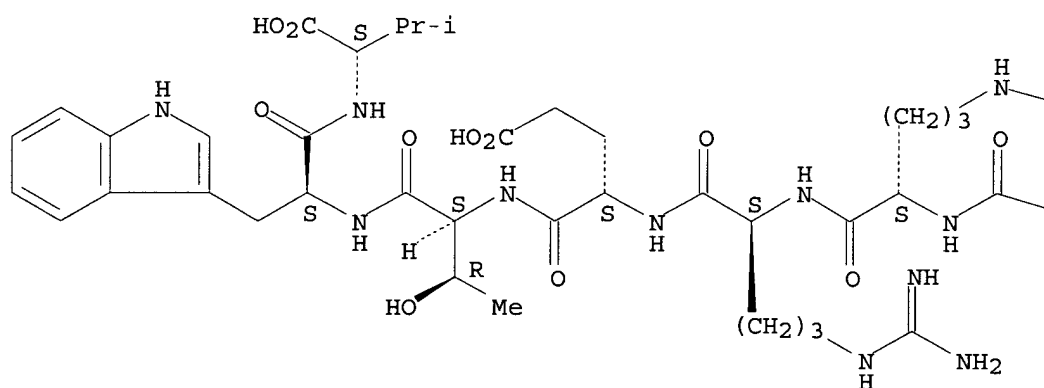


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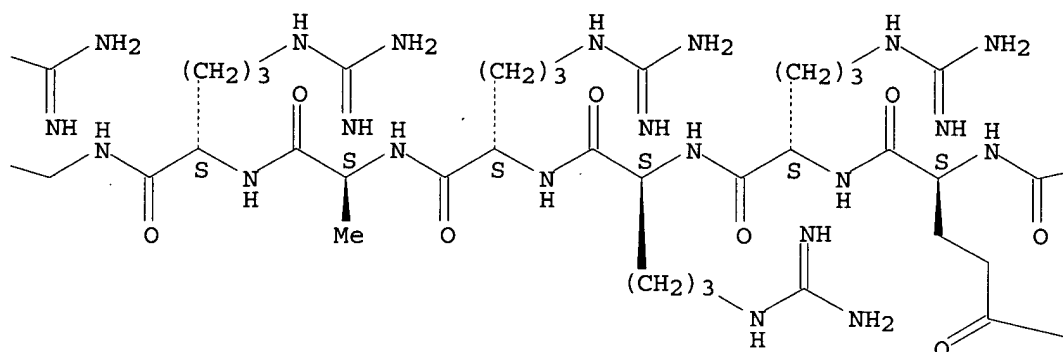
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Absolute stereochemistry.

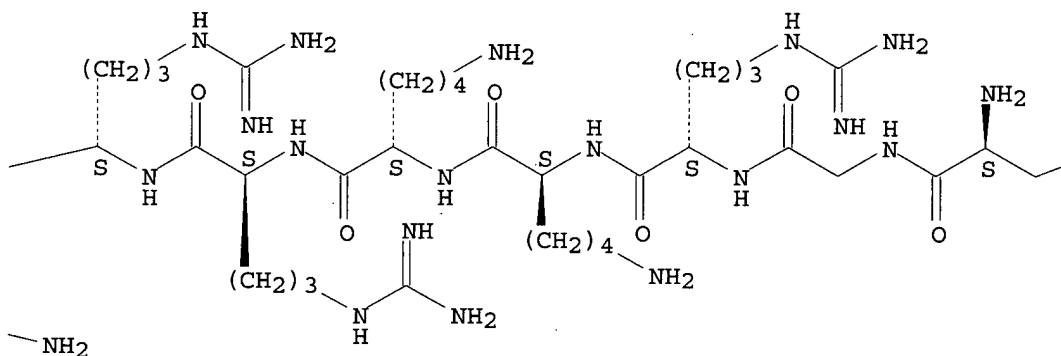
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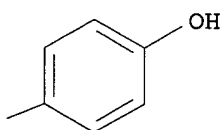
PAGE 1-B



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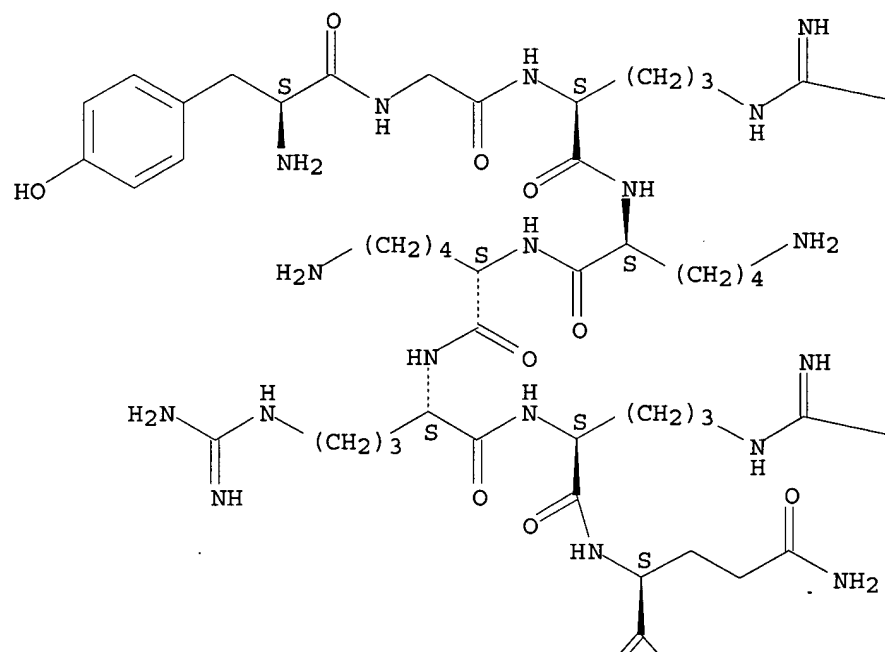
PAGE 1-D



RN 785805-25-6 HCAPLUS  
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 (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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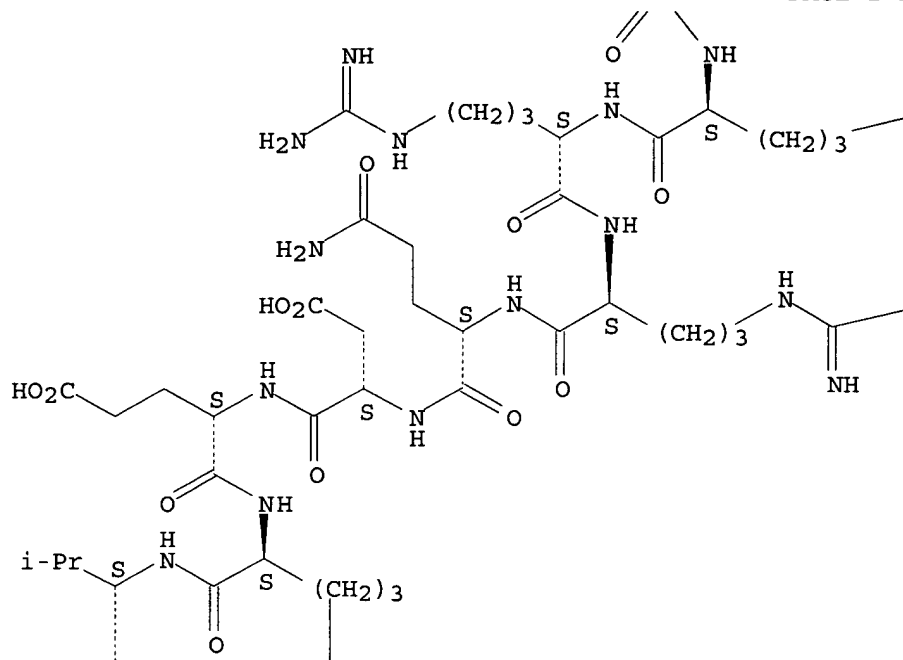


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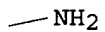
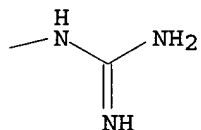
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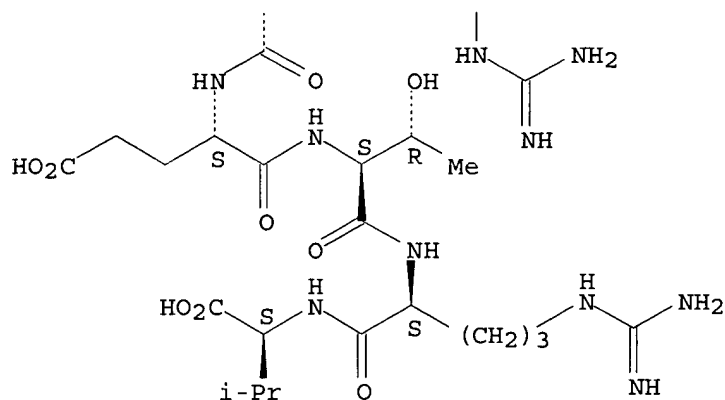


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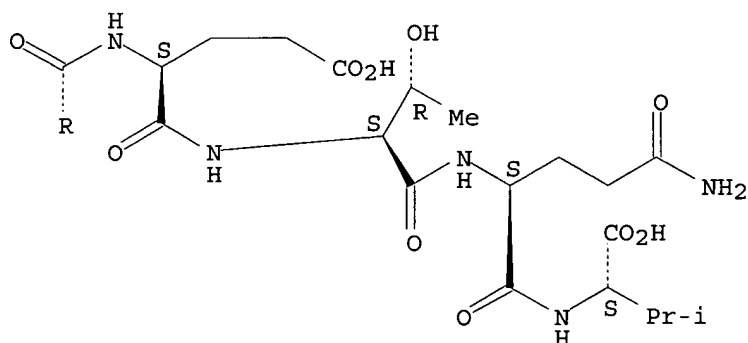
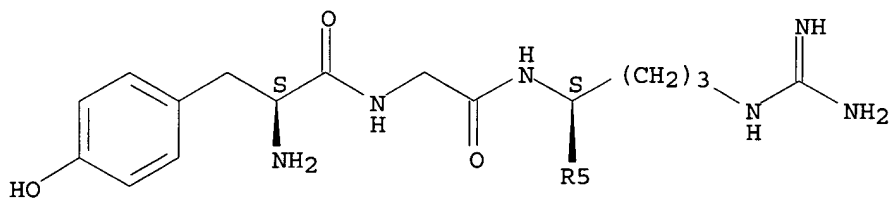




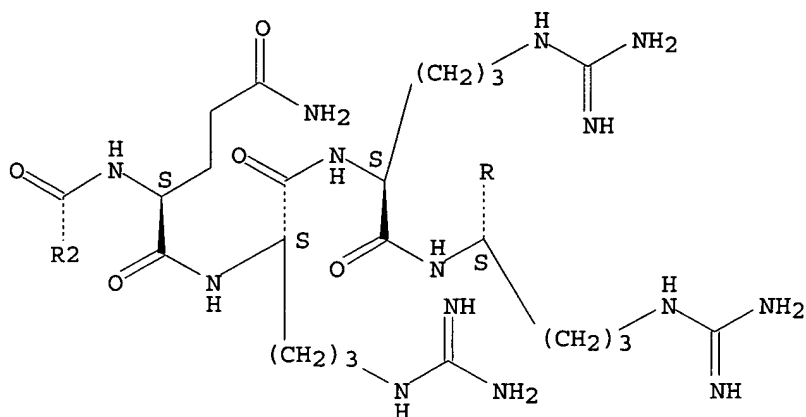
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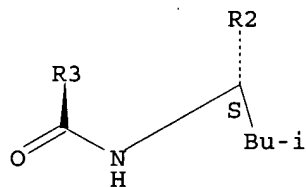
Absolute stereochemistry.



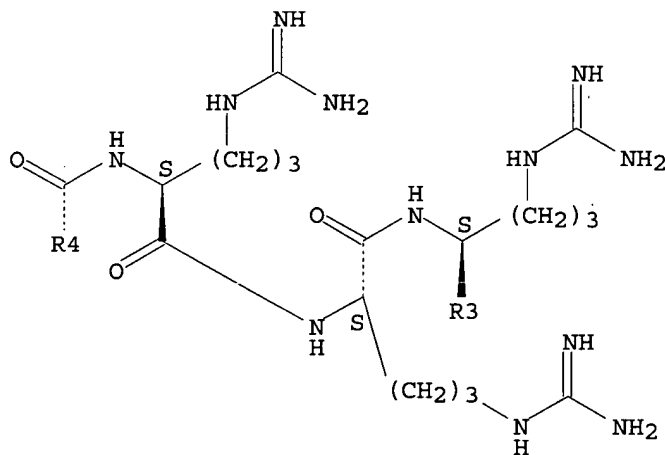
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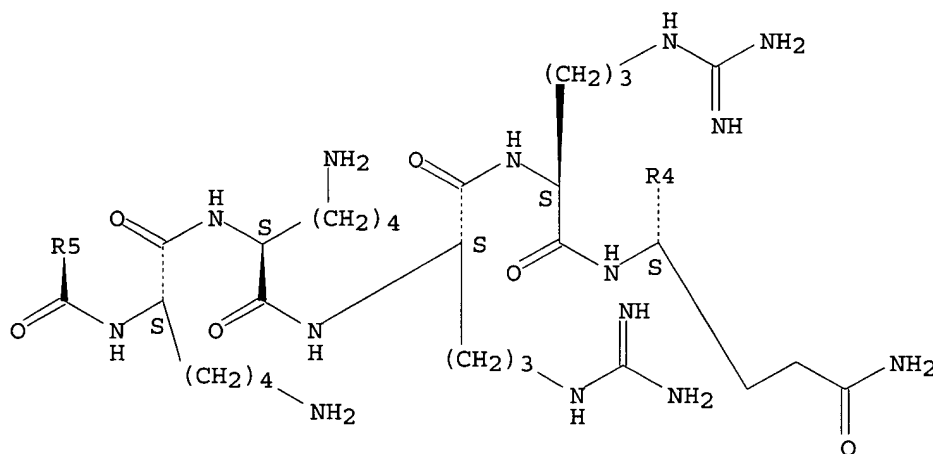


PAGE 3-A



PAGE 4-A





PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003097671	A1	20031127	WO 2003-KR630	20030328
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1495045	A1	20050112	EP 2003-713056	20030328
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
PRIORITY APPLN. INFO.:			KR 2002-17546	A 20020329
			WO 2003-KR630	W 20030328

AB The present invention relates to a cytoplasmic transduction peptide (CTP)

showing transduction potential, as well as cytoplasmic remaining potential and various uses thereof. The CTP of this invention exhibits a transduction potential identical or higher than the conventional protein transduction, PTD, and a strong tendency to remain in the cytoplasm, so that it is very useful in inducing cytotoxic T lymphocytes (CTL) and a drug delivery system (DDS) targeting cytoplasm.

IC ICM C07K007-06  
 CC 6-3 (General Biochemistry)  
 IT Cell membrane  
 Drug delivery systems  
 Liver  
 Lymphocyte  
 $\alpha$ -Helix  
 (cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)  
 IT Peptides, biological studies  
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
 (cytoplasmic transduction; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)  
 IT Conformation  
 (protein; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)  
 IT Liver  
 (toxicity; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)  
 IT 604789-17-5 627867-09-8 627867-11-2 627867-13-4 627867-15-6  
 627867-17-8 627867-19-0 627867-20-3 627867-22-5 627867-24-7  
 627867-26-9 627867-28-1 627867-30-5  
 627867-33-8  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
 (cytoplasmic transduction peptide sequence; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)  
 IT 9001-92-7, Proteinase  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and drug delivery system (DDS) targeting cytoplasm)  
 IT 123251-89-8 143413-47-2 191936-91-1 227199-96-4 244283-56-5  
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 RL: PRP (Properties)  
 (unclaimed sequence; cytoplasmic transduction peptides and uses for inducing cytotoxic T lymphocytes (CTL) and a drug

delivery system (DDS) targeting cytoplasm)

IT 627867-24-7 627867-26-9 627867-28-1  
627867-30-5

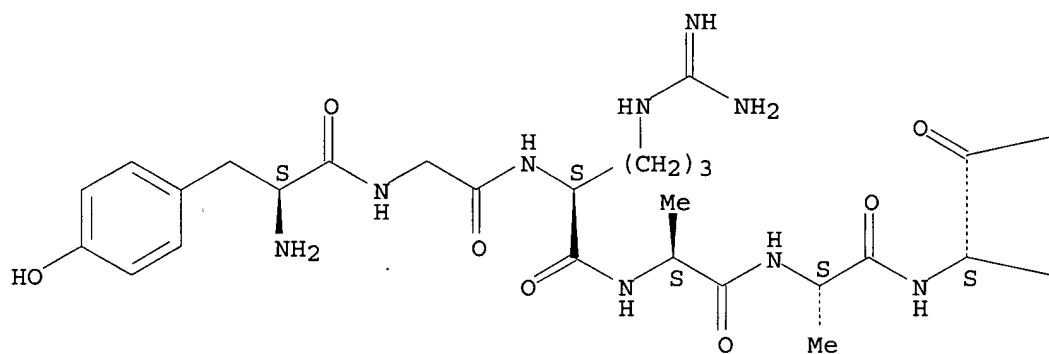
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cytotoxic T lymphocytes (CTL) and drug delivery system (DDS)  
targeting cytoplasm)

RN 627867-24-7 HCAPLUS

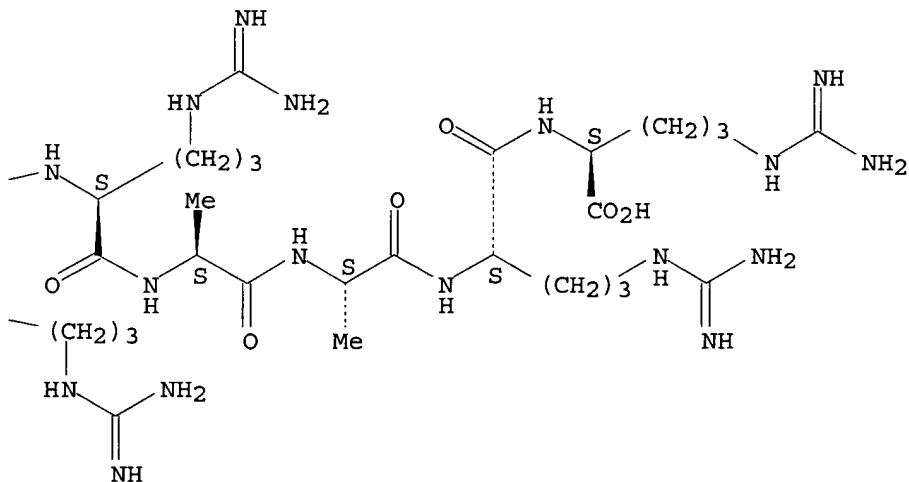
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Absolute stereochemistry.

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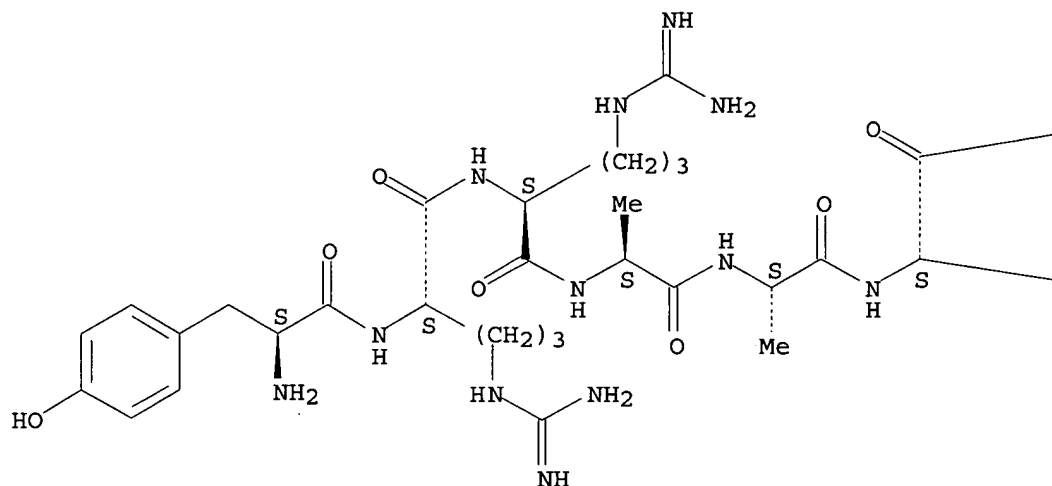


RN 627867-26-9 HCAPLUS

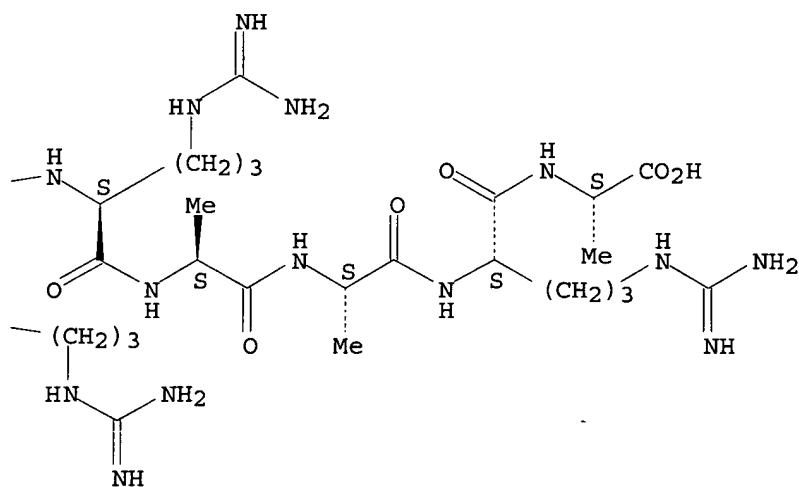
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Absolute stereochemistry.

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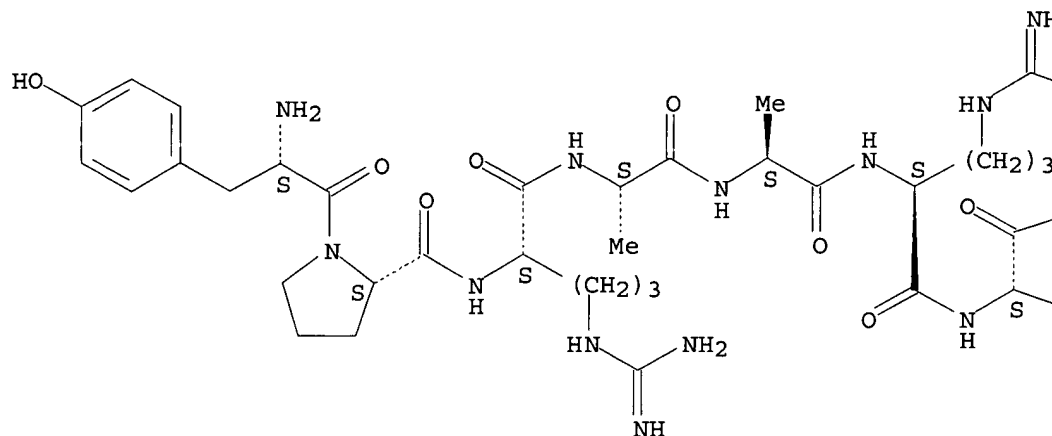


RN 627867-28-1 HCAPLUS

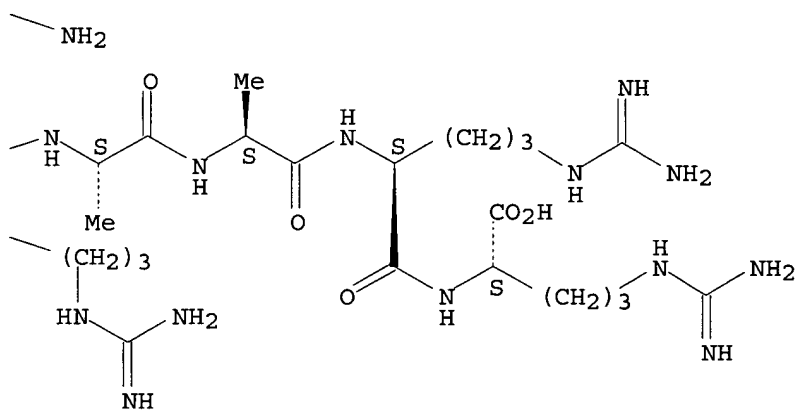
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Absolute stereochemistry.

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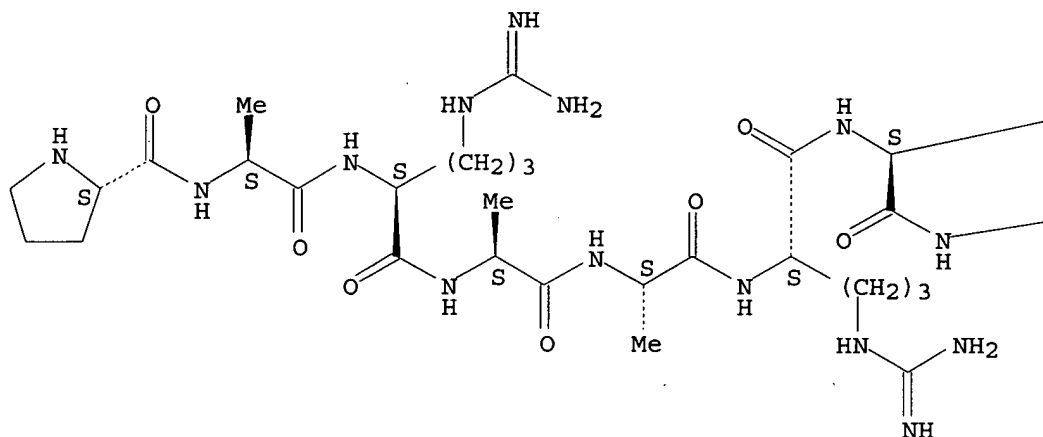
RN 627867-30-5 HCAPLUS

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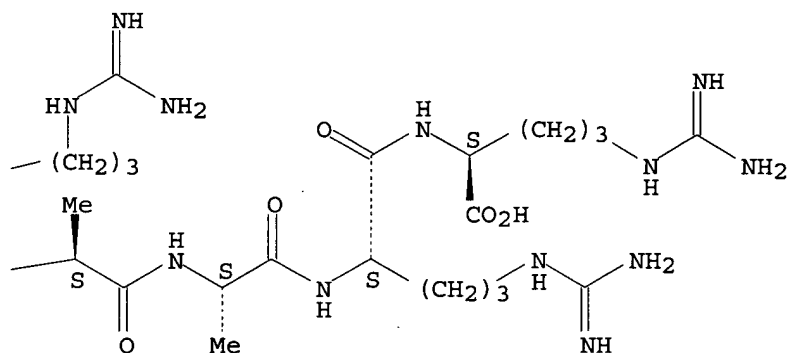
Absolute stereochemistry.



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IT 191936-91-1

RL: PRP (Properties)

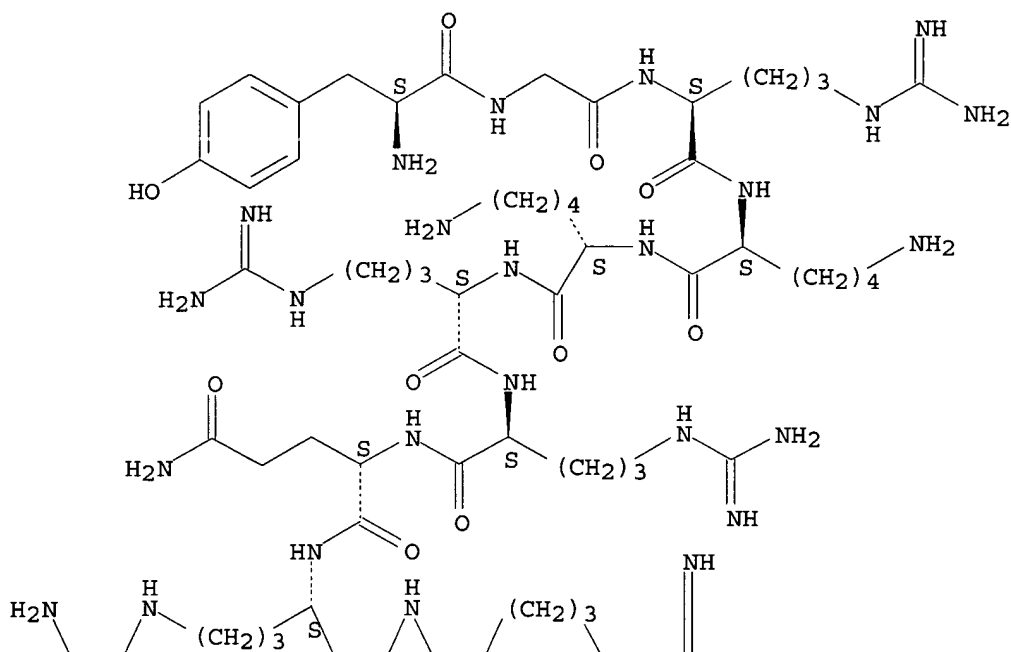
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delivery system (DDS) targeting cytoplasm)

RN 191936-91-1 HCAPLUS

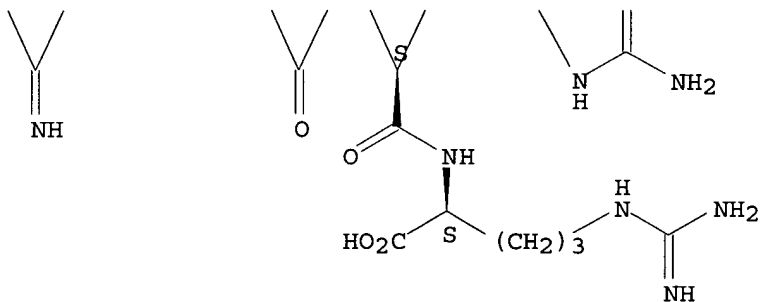
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L-glutaminyl-L-arginyl-L-arginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:930859 HCAPLUS

DOCUMENT NUMBER: 140:14513

TITLE: Identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses  
 INVENTOR(S): Robbins, Paul D.; Mi, Zhibao; Frizzell, Raymond; Glorioso, Joseph C.; Gambotto, Andrea; Mai, Jeffrey C.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 140 pp., Cont.-in-part of U.S. Ser. No. 75,869.

CODEN: USXXCO

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3.  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003219826	A1	20031127	US 2003-366493	20030212
US 6881825	B1	20050419	US 2000-653182	20000831
US 2003104622	A1	20030605	US 2002-75869	20020213
PRIORITY APPLN. INFO.:			US 1999-151980P	P 19990901
			US 2000-188944P	P 20000313
			US 2000-653182	A2 20000831
			US 2002-75869	A2 20020213

ED Entered STN: 28 Nov 2003

AB The present invention relates to internalizing peptides which facilitate the uptake and transport of cargo into the cytoplasm and nuclei of cells as well as methods for the identification of such peptides. The internalizing peptides of the present invention are selected for their ability to efficiently internalize cargo into a wide variety of cell types both in vivo and in vitro. The method for identification of the internalizing peptides of the present invention comprises incubating a target cell with a peptide display library, isolating peptides with internalization characteristics and determining the ability of said peptide to internalize cargo into a cell. The peptides of the invention are useful in therapeutic applications, such as: stimulating the immune response in a subject; selectively inducing apoptosis in cells, such as cancer and arthritic cells; facilitating transfer of proteins and peptides to the lung for treatment of cystic fibrosis, lung inflammation or injury.

IC ICM G01N033-53

ICS C12N009-12; C12N009-64; C07K007-08

INCL 435007100; 435194000; 435226000; 530328000

CC 9-2 (Biochemical Methods)

Section cross-reference(s): 1, 3, 15, 63

IT Animal cell line

(3T3, peptide-cargo conjugate internalization in; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)

IT Animal cell line

(C2C12, peptide-cargo conjugate internalization in; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)

IT Animal cell line

(CHO, peptide-cargo conjugate internalization in; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)

IT Animal cell line

(Calu-3, phage display library panning of; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)

IT Proteins

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (DIABLO, as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)

IT Animal cell line

(DU-145, phage display library panning of; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)

- IT Animal cell line  
(HBE144, peptide-cargo conjugate internalization in; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Animal cell line  
(Hig-82, phage display library panning of; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Animal cell line  
(MDCK, peptide-cargo conjugate internalization in; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Animal cell line  
(Mca 205, peptide-cargo conjugate internalization in; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Transcription factors  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NF- $\kappa$ B (nuclear factor of  $\kappa$  light chain gene enhancer in B-cells), inhibition of NF- $\kappa$ B mediated apoptosis in Islet cells; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Proteins  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (TRAIL (tumor necrosis factor-related apoptosis-inducing ligand), administration into tumor cell; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Peptides, biological studies  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (antimicrobial, as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Proteins  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (apoptosis-regulating, as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Genetic vectors  
Viral vectors  
Virus  
(as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT p53 (protein)  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Antigens  
DNA  
Proteins  
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of

- proteins, DNA and viruses)
- IT Organelle
  - (caveolae, in uptake of peptide complexes; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Uterus
  - (cervix, peptide-cargo conjugate internalization in; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Anti-inflammatory agents
  - Antioxidants
    - (delivery of, to lung epithelium; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Lung
  - (epithelium, delivery of antioxidants and antiinflammatory to; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Dendritic cell
  - (for inducing apoptosis in tumor cells; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Test kits
  - (for internalizing GST-fusion protein; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Leader peptides
  - RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
    - (fusion proteins with cargo protein and internalizing peptide; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Proteins
  - RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
    - (green fluorescent, fusion proteins with GST; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Antiarthritics
  - Antidiabetic agents
  - Antitumor agents
  - Biological transport
  - Cell nucleus
  - Cytoplasm
  - Drug delivery systems
  - Human
  - Molecular cloning
  - Panning
  - Phage display
  - Prostate gland, neoplasm
  - Vaccines
    - (identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Cell death
  - (in synovial cells; identification and therapeutic use of peptides that

- facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Neoplasm  
(induction of apoptosis in; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Pancreatic islet of Langerhans  
(inhibition of apoptosis in; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Biological transport  
(internalization; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Apoptosis  
(modulation of; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Protonation  
(of peptides increases internalization; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Peptidomimetics  
(of smac, as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Peptide library  
Phage display library  
(peptide display library; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT CD4-positive T cell  
CD8-positive T cell  
(phage display library panning of; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Coliphage M13  
(phage display library; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Protein motifs  
(protein transduction domain; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Epithelium  
(pulmonary, delivery of antioxidants and antiinflammatory to; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Arthritis  
Leukocyte  
(reduction of leukocytes in arthritic joints; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Protamines  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(sulfates, as agent facilitating internalization; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)

- IT Synovial membrane  
(synoviocyte, inducing cell death of; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Human herpesvirus  
(thymidine kinase of, as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Peptides, biological studies  
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); CST (Combinatorial study, unclassified); PRP (Properties); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)  
(transport-facilitating; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Biological transport  
(uptake; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Immunization  
(vaccination; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT Fusion proteins (chimeric proteins)  
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(with leader and cargo protein and internalizing peptide; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT 33419-42-0, Etoposide  
RL: PAC (Pharmacological activity); BIOL (Biological study)  
(administration into tumor cell; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT 9042-14-2, Dextran sulfate 9050-30-0, Heparan sulfate  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(as agent facilitating internalization; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT 9031-11-2D,  $\beta$ -Galactosidase, conjugates 146368-16-3D, Cy3, conjugates  
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT 70-18-8DP, Glutathione, conjugates  
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)
- IT 169592-56-7, Caspase-3  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(as cargo; identification and therapeutic use of peptides that facilitate uptake and **cytoplasmic** and nuclear transport of proteins, DNA and viruses)

IT 554-38-1P 997-20-6P 21743-34-0P 21743-35-1P 26791-46-8P  
 53733-92-9P 64134-30-1P 64134-32-3P 96337-25-6P 105151-62-0P  
 148796-86-5P 148796-87-6P 184240-24-2P 184240-26-4P 188842-14-0P  
**191936-91-1P** 207452-60-6P 329004-12-8P 329004-13-9P  
 329004-14-0P 329004-15-1P 329004-16-2P 329004-17-3P 329004-18-4P  
 329004-19-5P 329004-20-8P 329004-21-9P 329004-22-0P 329004-23-1P  
 329004-24-2P 329004-25-3P 329004-26-4P 329004-27-5P 329004-28-6P  
 329004-29-7P 329004-30-0P 329004-31-1P 329004-32-2P 329004-33-3P  
 329004-34-4P 329004-35-5P 329004-36-6P 329004-37-7P 329004-38-8P  
 329004-39-9P 329004-40-2P 329004-41-3P 329004-42-4P 329004-43-5P  
 329004-44-6P 329004-45-7P 329004-46-8P 329004-47-9P 329004-48-0P  
 329004-49-1P 329004-50-4P 329004-51-5P 329004-52-6P 329004-53-7P  
 329004-54-8P 329004-55-9P 329004-56-0P 329004-57-1P 329004-58-2P  
 329004-59-3P 329004-60-6P 329004-61-7P 329004-62-8P 329004-63-9P  
 329004-64-0P 329004-65-1P 329004-66-2P 329004-67-3P 329004-68-4P  
 329004-69-5P 329004-70-8P 329004-72-0P 329004-73-1P 329004-74-2P  
 329004-75-3P 329004-76-4P 329004-77-5P 329004-78-6P 329004-79-7P  
 350706-83-1P 490023-86-4P 490023-87-5P 490023-88-6P 537014-64-5P  
 537014-65-6P 537014-66-7P 537014-67-8P 537014-68-9P 537014-69-0P  
 537014-71-4P 537014-74-7P 628299-93-4P 628299-94-5P 628299-95-6P  
 628299-96-7P 628299-97-8P 628299-98-9P 628299-99-0P 628357-75-5P  
 629706-74-7P 629706-75-8P

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 BUU (Biological use, unclassified); CST (Combinatorial study,  
 unclassified); PRP (Properties); BIOL (Biological study); CMBI  
 (Combinatorial study); PREP (Preparation); USES (Uses)

(identification and therapeutic use of peptides that facilitate uptake  
 and **cytoplasmic** and nuclear transport of proteins, DNA and  
 viruses)

IT 80449-01-0, DNA topoisomerase

RL: MSC (Miscellaneous)

(inhibitor, administration into tumor cell; identification and  
 therapeutic use of peptides that facilitate uptake and  
**cytoplasmic** and nuclear transport of proteins, DNA and viruses)

IT 50812-37-8DP, Glutathione S transferase, fusion proteins

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 BUU (Biological use, unclassified); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)

(internalization of; identification and therapeutic use of peptides  
 that facilitate uptake and **cytoplasmic** and nuclear transport  
 of proteins, DNA and viruses)

IT 9002-06-6, Thymidine kinase

RL: BSU (Biological study, unclassified); BUU (Biological use,  
 unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (of HSV, as cargo; identification and therapeutic use of peptides that  
 facilitate uptake and **cytoplasmic** and nuclear transport of  
 proteins, DNA and viruses)

IT 56-87-1, L-Lysine, biological studies 70-26-8, Ornithine 71-00-1,  
 L-Histidine, biological studies 74-79-3, L-Arginine, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(peptide containing; identification and therapeutic use of peptides that  
 facilitate uptake and **cytoplasmic** and nuclear transport of  
 proteins, DNA and viruses)

IT **191936-91-1P**

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 BUU (Biological use, unclassified); CST (Combinatorial study,  
 unclassified); PRP (Properties); BIOL (Biological study); CMBI



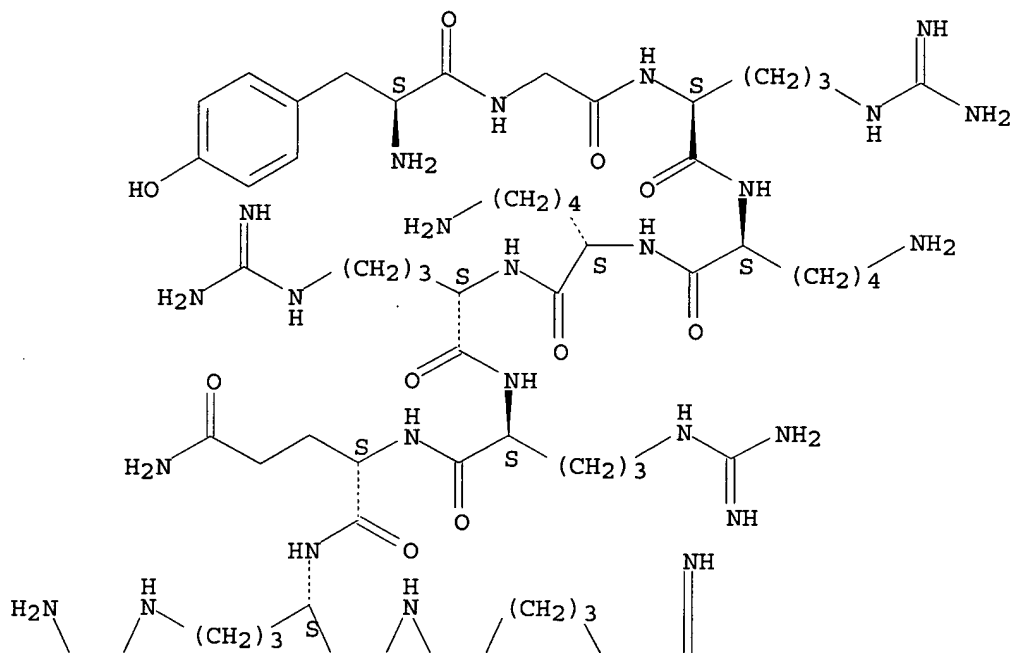
(Combinatorial study); PREP (Preparation); USES (Uses)  
 (identification and therapeutic use of peptides that facilitate uptake  
 and **cytoplasmic** and nuclear transport of proteins, DNA and  
 viruses)

RN 191936-91-1 HCAPLUS

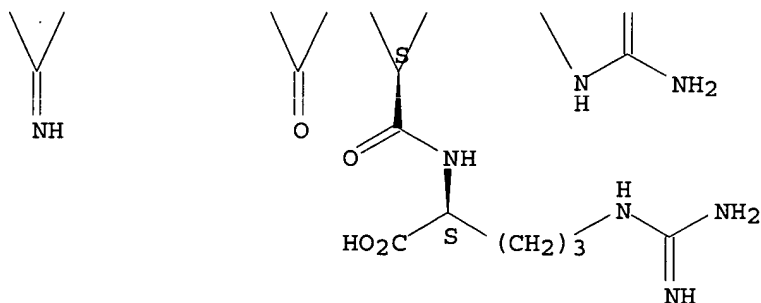
CN L-Arginine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-  
 L-glutaminyl-L-arginyl-L-arginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



L14 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:633730 HCAPLUS

DOCUMENT NUMBER: 139:192516

TITLE: Protein and cDNA sequences of human and mouse  
**cytoplasmic** scaffolding protein JLP and

functions in modulating apoptotic response in cells  
 INVENTOR(S): Lee, Clement M.; Dhanasekaran, N.; Reddy, Premkumar E.  
 PATENT ASSIGNEE(S): Temple University of the Commonwealth System of Higher  
 Education, USA  
 SOURCE: PCT Int. Appl., 102 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003066652	A2	20030814	WO 2003-US3355	20030204
WO 2003066652	A3	20031030		
WO 2003066652	C1	20040219		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-354377P P 20020205

ED Entered STN: 15 Aug 2003

AB The present invention relates to protein and cDNA sequences of human and mouse cytoplasmic scaffolding protein JLP and their functions in modulating apoptotic response. Specifically, the protein tethers MEKK3, MKK4, JNK, p38 MAPK, C-Myc and MAX into a signaling module that controls the apoptotic response. Nucleic acid sequences which encode JLP, and methods of using the JLP nucleic acids and proteins, and mutants thereof, to modulate the apoptotic response in cells are provided.

IC ICM C07H021-04

ICS A01N061-00; C12N015-87

CC 3-3 (Biochemical Genetics)

Section cross-reference(s): 6, 13

IT Transcription factors

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (Max, protein JLP interacting with; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (against protein JLP; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT Transcription factors

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (c-myc, protein JLP interacting with; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT Immunoassay

(coimmunopptn. assay; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(monoclonal, against protein JLP; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT Signal transduction, biological  
(pathway; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT Antitumor agents  
Bone marrow  
Chemotherapy  
Hematopoietic precursor cell  
Human  
Hybridoma  
Ionizing radiation  
Molecular cloning  
Mus  
Nucleic acid hybridization  
Plasmid vectors  
Protein engineering  
Protein sequences  
Stress, animal  
Stress, microbial  
Stress, plant  
cDNA sequences  
(protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT Apoptosis  
(response; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT Proteins  
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(scaffolding, JLP; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT Bone marrow  
(toxicity; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

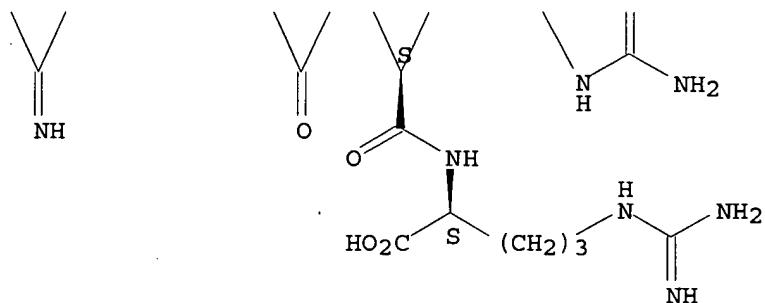
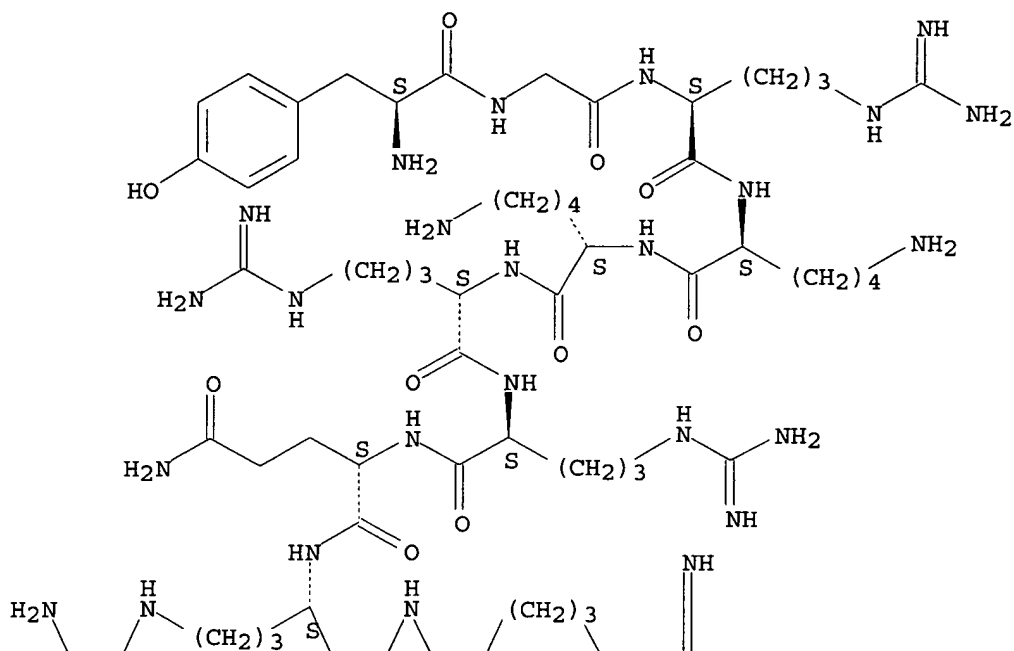
IT 581826-09-7 581826-10-0  
RL: PRP (Properties)  
(Unclaimed; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT 581824-30-8P, Scaffolding protein JLP (human) 581824-31-9P, Scaffolding protein JLP (mouse) 581824-34-2P 581824-35-3P 581824-36-4P  
581824-37-5P 581824-38-6P 581824-39-7P 581824-40-0P 581824-41-1P  
581824-43-3P 581824-45-5P 581824-46-6P  
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(amino acid sequence; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)

IT 289898-51-7, JNK 1

- RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(mouse JLP interacting with; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)
- IT 581824-20-6 581824-29-5 581824-42-2 581824-44-4 581824-47-7  
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(nucleotide sequence; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)
- IT 142243-02-5, MAP kinase 142805-58-1, Kinase (phosphorylating), mitogen-activated protein kinase 155215-87-5, JNK 165245-96-5, p38 MAP kinase 404344-49-6, Kinase (phosphorylating), mitogen-activated protein kinase kinase, 3  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(protein JLP interacting with; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)
- IT 581826-08-6  
RL: PRP (Properties)  
(unclaimed protein sequence; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)
- IT 136268-89-8 **191936-91-1**  
RL: PRP (Properties)  
(unclaimed sequence; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)
- IT **191936-91-1**  
RL: PRP (Properties)  
(unclaimed sequence; protein and cDNA sequences of human and mouse **cytoplasmic** scaffolding protein JLP and functions in modulating apoptotic response in cells)
- RN 191936-91-1 HCAPLUS
- CN L-Arginine, L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L14 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:117661 HCAPLUS  
 DOCUMENT NUMBER: 138:168809  
 TITLE: Vaccine comprising gp120 and Nef and/or Tat for the immunization against HIV  
 INVENTOR(S): Ertl, Peter Franz; Tite, John Philip; Van Wely, Catherine Ann; Voss, Gerald  
 PATENT ASSIGNEE(S): Glaxosmithkline Biologicals S.A., Belg.; Glaxo Group Limited  
 SOURCE: PCT Int. Appl., 108 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003011334	A1	20030213	WO 2002-EP8343	20020726
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2455329	AA	20030213	CA 2002-2455329	20020726
EP 1411979	A1	20040428	EP 2002-791473	20020726
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005507377	T2	20050317	JP 2003-516564	20020726
US 2005058657	A1	20050317	US 2004-485048	20040922
PRIORITY APPLN. INFO.:			GB 2001-18367	A 20010727
			WO 2002-EP8343	W 20020726

ED Entered STN: 14 Feb 2003

AB The invention concerns use of (a) an HIV Tat protein or polynucleotide; or (b) an HIV Nef protein or polynucleotide; or (c) an HIV Tat protein or polynucleotide linked to an HIV Nef protein or polynucleotide; and an HIV gp 120 protein or polynucleotide in the manufacture of a vaccine suitable for a prime-boost delivery for the prophylactic or therapeutic immunization of humans against HIV, wherein the protein or polynucleotide is delivered via a bombardment approach. The vaccines were shown to induce antibody and cytotoxic T-cell responses.

IC ICM A61K039-21

ICS A61K031-713; C12N015-49; C12N015-89; C07K014-16; C07K019-00

CC 15-2 (Immunochemistry)

ST vaccine HIV gp120 Nef Tat antibody CTL

IT 189011-77-6 189011-83-4 352513-81-6 497035-69-5 497035-70-8  
 497035-71-9 497035-72-0 497035-73-1 **497035-74-2**  
 497035-75-3 **497035-76-4** 497035-77-5 497035-78-6  
 497035-79-7 **497035-80-0** 497035-81-1 497035-82-2  
 497035-83-3 **497035-84-4** 497035-85-5 **497035-86-6**  
 497035-87-7 **497035-88-8** 497035-89-9 497035-90-2  
 497035-91-3 497035-92-4 497035-93-5 497035-94-6 497035-95-7  
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 497036-41-6 497036-42-7 497036-43-8 497036-44-9 497036-45-0  
 497036-46-1 497036-47-2 497036-48-3 497036-49-4 497036-50-7  
 497036-51-8 497036-52-9 497036-53-0 497036-54-1 497036-55-2  
 497036-56-3 497036-57-4 497036-58-5 497036-59-6 497036-60-9

RL: PRP (Properties)

(unclaimed sequence; vaccine comprising gp120 and Nef and/or Tat for the immunization against HIV)

IT 497035-74-2 497035-76-4 497035-80-0  
 497035-84-4 497035-86-6 497035-88-8  
 RL: PRP (Properties)  
 (unclaimed sequence; vaccine comprising gp120 and Nef and/or Tat for  
 the immunization against HIV)

RN 497035-74-2 HCAPLUS  
 CN 24: PN: WO03011334 SEQID: 11 unclaimed sequence (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 497035-76-4 HCAPLUS  
 CN 26: PN: WO03011334 SEQID: 13 unclaimed sequence (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 497035-80-0 HCAPLUS  
 CN 30: PN: WO03011334 SEQID: 17 unclaimed sequence (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 497035-84-4 HCAPLUS  
 CN 34: PN: WO03011334 SEQID: 21 unclaimed sequence (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 497035-86-6 HCAPLUS  
 CN 36: PN: WO03011334 SEQID: 23 unclaimed sequence (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 497035-88-8 HCAPLUS  
 CN 38: PN: WO03011334 SEQID: 25 unclaimed sequence (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:869097 HCAPLUS  
 DOCUMENT NUMBER: 137:364402  
 TITLE: Novel stable expression vectors for nuclear-anchoring  
 protein and therapeutic protein or antigen as vaccines  
 or for gene therapy

INVENTOR(S): Krohn, Kai; Blazevic, Vesna; Taehtinen, Marja; Ustav,  
 Mart; Toots, Urve; Maennik, Andres; Ranki, Annamari;  
 Sikut, Rein; Janikson, Kadri; Ustav, Ene

PATENT ASSIGNEE(S): Fit Biotech Oyj PLC, Finland

SOURCE: PCT Int. Appl., 251 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002090558	A1	20021114	WO 2002-FI379	20020503
WO 2002090558	C2	20030206		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,  
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES,  
 FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,  
 KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
 MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL,  
 TJ, TM, TR, TT, TZ, UA, UG, US, VN, YU, ZA, ZM, ZW,  
 AM, AZ, BY, KG

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

FI 2001000922	A	20021104	FI 2001-922	20010503
CA 2446260	AA	20021114	CA 2002-2446260	20020503
US 2003129169	A1	20030710	US 2002-138098	20020503
EP 1390516	A1	20040225	EP 2002-722308	20020503

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

BR 2002009416	A	20040330	BR 2002-9416	20020503
EE 200300483	A	20040415	EE 2003-483	20020503
JP 2004533247	T2	20041104	JP 2002-587618	20020503
US 2005026137	A1	20050203	US 2003-476615	20031103

PRIORITY APPLN. INFO.: FI 2001-922 A 20010503  
US 2002-138098 A 20020503  
WO 2002-FI379 W 20020503

ED Entered STN: 15 Nov 2002

AB The present invention relates to novel vectors, to DNA vaccines and gene therapeutics containing said vectors, to methods for the preparation of the vectors and DNA vaccines and gene therapeutics containing the vectors, and to therapeutic uses of said vectors. More specifically, the present invention relates to novel vectors comprising (a) an expression cassette of a gene of a nuclear-anchoring protein, which contains (i) a DNA binding domain capable of binding to a specific DNA sequence and (ii) a functional domain capable of binding to a nuclear component and (b) a multimerized DNA sequence forming a binding site for the anchoring protein, and optionally (c) one or more expression cassettes of a DNA sequence of interest. In particular the invention relates to vectors that lack a papilloma virus origin of replication. The nuclear-anchoring protein might be the E2 protein of Bovine Papilloma Virus type 1 or Epstein-Barr Virus Nuclear Antigen 1. The invention also relates to vectors that lack an origin of replication functional in a mammalian cell. The invention further relates to methods for expressing a DNA sequence of interest in a subject. The vector system expressing bovine papillomavirus type 1 E2 protein (as well as HIV1 nef or GFP reporter) and its 10 binding sites, or expressing Epstein-Barr virus (EBV) EBNA-1 protein and containing 20 binding sites for EBNA-1-(FR element), are demonstrated to have active mechanism of segregation based on a nuclear-anchoring protein and its binding sites that promotes its maintenance in a population of proliferating cells as a transcriptionally active element. The recombinant expression of and cellular and humoral immune response to vectors expressing HIV1 nef or gag, or hybrid of nef and rev and tat (for MultiREG antigens) are detected.

IC ICM C12N015-86

ICS C12N015-63; C12N015-85; A61K048-00; A61P031-00

CC 3-2 (Biochemical Genetics)

Section cross-reference(s): 1, 6, 10, 15

IT Epitopes  
(CTL, a stretch of Th and CTL epitope; novel stable expression vectors for nuclear-anchoring protein and therapeutic protein or antigen as vaccines or for gene therapy)

IT Plasmid vectors  
(FREBNA-TRN-CTL-optp17/24, HIV1 multi-epitope vector; novel stable expression vectors for nuclear-anchoring protein and therapeutic protein or antigen as vaccines or for gene therapy)

IT Plasmid vectors  
(GTU-1-RNT-CTL, HIV1 nef and rev and tat and CTL epitope MultiREG vector; novel stable expression vectors for nuclear-anchoring protein and therapeutic protein or antigen as



vaccines or for gene therapy)

IT Plasmid vectors  
(GTU-1-TRN-CTL, HIV1 nef and rev and tat and CTL  
epitope MultiREG vector; novel stable expression vectors for  
nuclear-anchoring protein and therapeutic protein or antigen as  
vaccines or for gene therapy)

IT Plasmid vectors  
(GTU-1-TRN-CTL-optgag, HIV1 nef and rev and tat and gag and  
CTL epitope MultiREG vector; novel stable expression vectors  
for nuclear-anchoring protein and therapeutic protein or antigen as  
vaccines or for gene therapy)

IT Plasmid vectors  
(GTU-1-TRN-optgag-CTL, HIV1 nef and rev and tat and  
CTL epitope gag MultiREG vector; novel stable expression  
vectors for nuclear-anchoring protein and therapeutic protein or  
antigen as vaccines or for gene therapy)

IT Plasmid vectors  
(TRN-CTL-optp17/24, HIV1 multi-epitope vector; novel stable  
expression vectors for nuclear-anchoring protein and therapeutic  
protein or antigen as vaccines or for gene therapy)

IT 475457-57-9 475457-58-0 475457-59-1  
475457-60-4 475457-61-5 475457-62-6  
475457-63-7 475457-64-8 475457-65-9  
475457-66-0 475457-67-1 475457-68-2 475457-69-3  
475457-70-6 475457-71-7 475457-72-8  
475457-73-9 475457-74-0 475457-75-1  
475457-76-2 475457-77-3 475457-78-4  
475457-79-5 475457-81-9 475457-83-1  
RL: PRP (Properties)  
(unclaimed protein sequence; novel stable expression vectors for  
nuclear-anchoring protein and therapeutic protein or antigen as  
vaccines or for gene therapy)

IT 475457-57-9 475457-58-0 475457-59-1  
475457-60-4 475457-61-5 475457-62-6  
475457-63-7 475457-64-8 475457-65-9  
475457-69-3 475457-70-6 475457-71-7  
475457-72-8 475457-73-9 475457-74-0  
475457-75-1 475457-76-2 475457-77-3  
475457-78-4 475457-79-5  
RL: PRP (Properties)  
(unclaimed protein sequence; novel stable expression vectors for  
nuclear-anchoring protein and therapeutic protein or antigen as  
vaccines or for gene therapy)

RN 475457-57-9 HCAPLUS  
CN 25: PN: WO02090558 SEQID: 25 unclaimed protein (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-58-0 HCAPLUS  
CN 26: PN: WO02090558 SEQID: 26 unclaimed protein (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-59-1 HCAPLUS  
CN 27: PN: WO02090558 SEQID: 27 unclaimed protein (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-60-4 HCAPLUS  
CN 28: PN: WO02090558 SEQID: 28 unclaimed protein (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-61-5 HCAPLUS

CN 29: PN: WO02090558 SEQID: 29 unclaimed protein (9CI) (CA INDEX NAME)  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-62-6 HCAPLUS  
CN 30: PN: WO02090558 SEQID: 30 unclaimed protein (9CI) (CA INDEX NAME)  
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RN 475457-63-7 HCAPLUS  
CN 31: PN: WO02090558 SEQID: 31 unclaimed protein (9CI) (CA INDEX NAME)  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-64-8 HCAPLUS  
CN 32: PN: WO02090558 SEQID: 32 unclaimed protein (9CI) (CA INDEX NAME)  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-65-9 HCAPLUS  
CN 33: PN: WO02090558 SEQID: 33 unclaimed protein (9CI) (CA INDEX NAME)  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-69-3 HCAPLUS  
CN 38: PN: WO02090558 SEQID: 38 unclaimed protein (9CI) (CA INDEX NAME)  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-70-6 HCAPLUS  
CN 39: PN: WO02090558 SEQID: 39 unclaimed protein (9CI) (CA INDEX NAME)  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-71-7 HCAPLUS  
CN 40: PN: WO02090558 SEQID: 40 unclaimed protein (9CI) (CA INDEX NAME)  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-72-8 HCAPLUS  
CN 41: PN: WO02090558 SEQID: 41 unclaimed protein (9CI) (CA INDEX NAME)  
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RN 475457-73-9 HCAPLUS  
CN 42: PN: WO02090558 SEQID: 42 unclaimed protein (9CI) (CA INDEX NAME)  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 475457-74-0 HCAPLUS  
CN 43: PN: WO02090558 SEQID: 43 unclaimed protein (9CI) (CA INDEX NAME)  
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RN 475457-75-1 HCAPLUS  
CN 44: PN: WO02090558 SEQID: 44 unclaimed protein (9CI) (CA INDEX NAME)  
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RN 475457-76-2 HCAPLUS  
CN 45: PN: WO02090558 SEQID: 45 unclaimed protein (9CI) (CA INDEX NAME)  
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CN 46: PN: WO02090558 SEQID: 46 unclaimed protein (9CI) (CA INDEX NAME)  
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RN 475457-78-4 HCAPLUS  
CN 47: PN: WO02090558 SEQID: 47 unclaimed protein (9CI) (CA INDEX NAME)  
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RN 475457-79-5 HCAPLUS

CN 48: PN: WO02090558 SEQID: 48 unclaimed protein (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:94988 HCAPLUS

DOCUMENT NUMBER: 126:210883

TITLE: Antiviral pressure exerted by HIV-1-specific cytotoxic T lymphocytes (CTLs) during primary infection demonstrated by rapid selection of CTL escape virus

AUTHOR(S): Borrow, Persephone; Lewicki, Hanna; Wei, Xiping; Horwitz, Marc S.; Pepper, Nancy; Meyers, Heather; Nelson, Jay A.; Gairin, Jean Edouard; Hahn, Beatrice H.; Oldstone, Michael B. A.; Shaw, George M.

CORPORATE SOURCE: Dep. Neuropharmacology, The Scripps Res. Inst., La Jolla, CA, 92037, USA

SOURCE: Nature Medicine (New York) (1997), 3(2), 205-211  
CODEN: NAMEFI; ISSN: 1078-8956

PUBLISHER: Nature Publishing Co.

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 10 Feb 1997

AB The HIV-1-specific cytotoxic T lymphocyte (CTL) response is temporally associated with the decline in viremia during primary HIV-1 infection, but definitive evidence that it is of importance in virus containment has been lacking. Here the authors show that in a patient whose early CTL response was focused on a highly immunodominant epitope in gp160, there was rapid elimination of the transmitted virus strain and selection for a virus population bearing amino acid changes at a single residue within this epitope, which conferred escape from recognition by epitope-specific CTL. The magnitude (>100-fold), kinetics (30-72 days from onset of symptoms) and genetic pathways of virus escape from CTL pressure were comparable to virus escape from antiretroviral therapy, indicating the biol. significance of the CTL response in vivo. One aim of HIV-1 vaccines should thus be to elicit strong CTL responses against multiple codominant viral epitopes.

CC 15-8 (Immunochemistry)

Section cross-reference(s): 3, 10

IT gag proteins

RL: PRP (Properties)

(Pr55gag; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)

IT Epitopes

Human immunodeficiency virus 1

Mutation

(antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)

IT Rev protein

RL: PRP (Properties)

(antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)

IT Vaccines

(antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of

- CTL** escape virus in relation to development of)
- IT T cell (lymphocyte)  
(cytotoxic; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Gene, microbial  
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)  
(env; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Gene, microbial  
RL: PRP (Properties)  
(gag; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Enzymes, properties  
RL: PRP (Properties)  
(gene pol; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Proteins, specific or class  
RL: PRP (Properties)  
(gene vif; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Proteins, specific or class  
RL: PRP (Properties)  
(gene vpr; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Phosphoproteins  
RL: PRP (Properties)  
(gene vpu; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Envelope proteins  
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)  
(gp160env; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Evolution  
(mol.; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Gene, microbial  
RL: PRP (Properties)  
(nef; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Gene, microbial  
RL: PRP (Properties)  
(pol; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of **CTL** escape virus)
- IT Gene, microbial  
RL: PRP (Properties)  
(rev; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of

CTL escape virus)  
 IT Gene, microbial  
 Transcription factors  
 RL: PRP (Properties)  
 (tat; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)  
 IT Gene, microbial  
 RL: PRP (Properties)  
 (vif; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)  
 IT Gene, microbial  
 RL: PRP (Properties)  
 (vpr; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)  
 IT Gene, microbial  
 RL: PRP (Properties)  
 (vpu; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)  
 IT 187953-63-5 187953-64-6 187953-65-7 187953-66-8 **187953-67-9**  
 187953-68-0 187953-69-1 187953-70-4 187953-71-5  
 RL: PRP (Properties)  
 (amino acid sequence; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)  
 IT 185127-18-8, GenBank U21135  
 RL: PRP (Properties)  
 (nucleotide sequence; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)  
 IT **187953-67-9**  
 RL: PRP (Properties)  
 (amino acid sequence; antiviral pressure exerted by HIV-1 gp160-specific cytotoxic T lymphocytes during primary infection demonstrated by rapid selection of CTL escape virus)  
 RN 187953-67-9 HCAPLUS  
 CN Tat protein (human immunodeficiency virus 1 clone WEAU-1.60 gene tat)  
 (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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